ARKANSAS DEPARTMENT OF HEALTH

OFFICE OF RURAL HEALTH

AND

PRIMARY CARE

STATE RURAL HEALTH PLAN

ARKANSAS RURAL HEALTH PLAN
November 2008

Arkansas Rural Health Plan

INTRODUCTION

The Medicare Rural Hospital Flexibility Grant Program was authorized by Section 4201 of the Balanced Budget Act (BBA) of 1997, (Public Law 105-33) and was reauthorized by Section 405 of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, (Public Law 108-173).

The Medicare Rural Hospital Flexibility Program (FLEX) helps sustain the rural healthcare infrastructure and fosters a growth of collaborative rural delivery systems across the continuum of care at the community level to maintain access to high quality care for rural Medicare beneficiaries. This is accomplished through the designation and support of small rural hospitals referred to as Critical Access Hospitals (CAH), the creation of rural health networks and strengthened community development, integration of emergency medical services into the healthcare system, and improvement in the quality of care provided to those served by this program.

In 1998, the Arkansas Department of Health (ADH) Office of Rural Health and Primary Care (ORHPC) convened rural health care stakeholders from across the state to create rural health networks, promote regionalization of rural health services in the state, and improve access to hospitals and other services for rural residents. The result was a rural health plan establishing a statewide FLEX program.

A Strategy and Business Plan was developed for ORHPC in 2004 as a result of Arkansas' participation in a Federal Office of Rural Health Policy-funded initiative with three other State Offices of Rural Health (SORH) from the states of Virginia, Florida and Kansas (**See Appendix 1**).

This revision to the initial plan written in 1998, as required by FLEX, is submitted to continue development of a system of rural health care.

PURPOSE OF PLAN

The purpose of this document is twofold. One is to describe the health needs of rural Arkansas residents through current demographic data. Secondly, it is to identify the state's available resources and programs supporting rural healthcare and the role of the FLEX program in addressing these needs. It has been developed by the Arkansas Department of Health, Office of Rural Health and Primary Care in consultation with representation from entities across the state with an interest in Arkansas' rural healthcare infrastructure (**See Appendix 2**).

It is important to note that there are many definitions of rural. For the purposes of this plan, rural is defined as those counties in Arkansas that are non-metropolitan statistical areas (MSA) (**See Appendix 3**).

This plan is developed via funding provided by the United States Department of Health and Human Services, Health Resources and Services Administration, Office of Rural Health Policy, Medicare Rural Hospital Flexibility Grant Program, Grant #H54RH00035. Questions and inquiries regarding the content of this document may be directed to Jacqueline Gorton, Program Coordinator at 501-661-2494 or Jacqueline.gorton@arkansas.gov.

I. STATE RURAL DEMOGRAPHIC PROFILE

Description of State

Arkansas is bounded on the north by Missouri; on the east by the Mississippi River, which separates it from Mississippi and Tennessee; on the south by Louisiana; and on the west by Oklahoma and Texas. In size, Arkansas ranks 27th among states, covering an area of 53,104 square miles. Of these, more than 9,000 miles are streams and rivers and 453,868 acres are lakes.

Arkansas is about equally divided between the Mississippi Delta in the east and south, and the Ozark plateaus in the west and north. Elevations in the Delta range from 70 feet in the south to 700 feet in the northeast. The hill section is divided into two areas of nearly equal size. To the north are the Ozark plateaus and to the south is the Ouachita province. Between them flows the Arkansas River, through a wide valley included in the Ouachita subdivision. Mount Magazine, in the Ouachita range, is the highest point in the state with an elevation of 2,753 feet.

Arkansas' major rivers are the Mississippi, St. Francis, White, Arkansas, Red, Ouachita and their tributaries, all of which drain to the south and southeast. Arkansas has scores of small streams and lakes, and the plateau section is noted for its many springs.

Population Distribution and Demographics

Nationally, in 2006 Arkansas was the 32nd most populated state in the union at 2,810,872. The state has only nine cities with populations over 50,000: Little Rock 184,422, Fort Smith 83,461, Fayetteville 68,726, Springdale 63,082, Jonesboro 60,489, North Little Rock 58,896, Conway 55,334, Rogers 52,181 and Pine Bluff 51,758. The majority of Arkansas cities have populations below 10,000.[1] (**Table 1**)

Table 1: Population

	Rural (non-MSAs)	Urban (MSAs)	Total
Year			
1980	1,094,847	1,191,510	2,286,357
1990	1,073,804	1,276,921	2,350,725
2000	1,156,949	1,516,451	2,673,400
2006 (latest estimates)	1,155,458	1,655,414	2,810,872

The age and racial make-up (**Table 2)** of the state (2006) looks like this:

Table 2: Age/Racial Make-up Race/Ethnicity	Arkansas	US	Rural	Urban
White	81.1%	80.9%	85.1%	80.4%
African American	15.7%	13.2%	15.9%	12.8%
Asian	1%	4.9%		
Hispanic	5%	14.8%		
Under 5 years of age	6.8 %	6.8%		
Under 18 years old	24.6 %	24.6%		
65+	13.8%	12.4%		

Between the years 2000 and 2006, the national Latino population increased by 26 percent (from 35.3 million to 44.3 million). The total population in small towns and rural areas only increased by 3 percent, while at the same time, the Latino population in these counties increased by 22 percent (from

[1] Refer to Appendix 3 Map 1: 2007 Arkansas MSAs and City Populations Map

2.6 million to 3.2 million, a 22 percent increase). In Arkansas, all but 16 of the 75 counties more than doubled their Latino population since 1990. They account for over 10 percent of the population in seven Arkansas counties, and in Sevier County, Latinos make up 25.5 percent of total population. "At current growth rates, Hispanics are projected to become the largest minority group in rural America by about 2025, as they did for the entire Nation in 2003."[2]

Economics

- Arkansas is proud of the five homegrown *Fortune* 500 companies headquartered here: Alltel, Dillard's, Murphy Oil, Tyson Foods and Wal-Mart

- Many retirees find Arkansas a great place to live, and the state will attract even more as the baby boomers grow older. The state ranks among the top in the U. S. in both retiree relocation and income

- Workforce development is a priority of the state's technical colleges and institutes, which work with local business and industry to meet existing and new workforce needs. More than 95 percent of the state's population lives within a 30-mile radius of one of these institutions

Income

- Per capita personal income (PCPI) was $28,444, making it 48th in the nation and at 78 percent of the national average ($36,629); in the same year, the population below poverty was 17.5% as compared to 12.3% for the US. Median family income (2006) for was $45,300, metropolitan areas at $51,200 and non-metropolitan areas at $40,000 (**Table 3)**.

Table 3: Arkansas Income: Rural vs. Urban

	Rural (Non-MSAs)	Urban (MSAs)	Total
Per-capita income (2005 dollars)			
2004	23,123	29,216	26,668
2005	22,952	29,323	26,681
Percent change	-0.7	0.4	0.0
Earnings per job (2005 dollars)			
2004	30,298	38,720	35,607
2005	29,214	38,387	35,024
Percent change	-3.6	-0.9	-1.6
Poverty rate (percent)			
1979	22.5	15.6	19.0
1989	22.8	15.9	19.1
1999	18.2	14.1	15.8
2004 (latest model-based estimates)	17.7	14.1	15.6

[2] Sources: http://rupri.org/Forms/Arkansas.pdf & the Population Reference Bureau.

Education

- Percent of population (2006) 25+ that are high school graduates was 82.5% compared with the US percent of 85.5% (**Table 4)**

- Percent of population (2006) 25+ that are college graduates was 19% as compared to 28% (28%) for the US

Table 4: Arkansas Education (Persons 25 and older): Rural vs. Urban			
	Rural (Non-MSAs)	**Urban (MSAs)**	**Total**
Percent not completing high school			
1980	50.9	38.6	44.5
1990	39.5	28.7	33.7
2000	29.3	21.1	24.7
Percent completing high school only			
1980	32.0	34.6	33.2
1990	33.7	31.9	32.7
2000	36.6	32.2	34.1
Percent completing some college			
1980	9.2	13.6	11.5
1990	17.0	23.1	20.3
2000	22.0	26.6	24.5
Percent completing college			
1980	8.3	13.2	10.8
1990	9.8	16.3	13.3
2000	12.2	20.2	16.7

Unemployment

- In 2006, Arkansas' rural unemployment rate was 6.2%, the urban unemployment rate (**Table 5)** was 4.7% and the state unemployment rate was 5.4%[3]

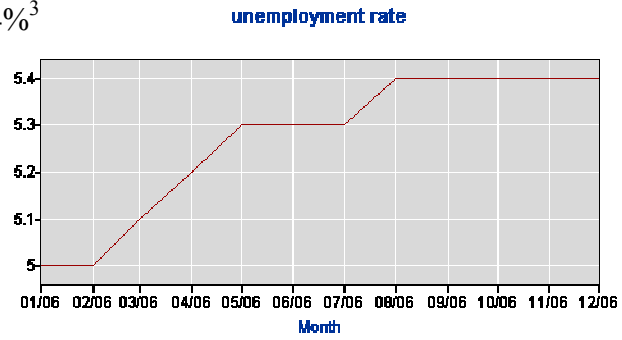


Table 5: Arkansas Employment: Rural vs. Urban			
	Rural (Non-MSAs)	**Urban (MSAs)**	**Total**
Total number of jobs			
2004	563,997	961,941	1,525,938
2005	571,100	986,697	1,557,797
Unemployment rate (percent)			
2005	6.1	4.4	5.1
2006	6.2	4.7	5.3

[3] 2006 Arkansas Unemployment Rate: BEA, 2007 Accessed October 2007

II. NEEDS ASSESSMENT

Arkansas Health Status and Health Disparities

Table 6: Health Disparities in Arkansas	*Black / White Disparity*
Infant mortality	+63%
Heart Disease	+25%
Ischemic Heart Disease	+21%
Colorectal Cancer	+46%
Breast Cancer	+43%
Cervical Cancer	+136%
Prostate Cancer	+143%
Stroke	+45%
Diabetes	+152%
Asthma	+194%
HIV/AIDS	+242%
Homicide	+490%
All Cause Mortality	+31%

In 2004, the Arkansas Minority Health Commission, a group dedicated to identifying and eradicating health disparities, conducted an extensive study of health care disparities in Arkansas.[4] The report documented a significant difference in mortality between African Americans and Whites, showing the overall mortality rate for African Americans is 31% higher than for Whites. **(Table 6)**

UnitedHealth Foundation publishes an annual report on the health status of our nation.[5] This report provides a state "snapshot" and establishes a baseline for monitoring changes over time. In 1999, Arkansas placed 50th in health status. By 2001 Arkansas had risen to a ranking of 42nd in the nation, however by the years 2002 - 2007, Arkansas fell into the bottom 10% of the ranking and has remained there, bouncing between being ranked 46th and 48th. **The mortality rates of heart disease, cancer, stroke, respiratory disease and unintentional injuries are higher in rural Arkansas than the state or national rate. (Table 7)**

Table 7: Age Adjusted Mortality Rates per 100,000 population, 2005

Rank[1]	*Leading Causes of Death*[2]	AR[3]	U.S.[4]	Rural AR[3]	Urban AR[3]
1	Diseases of Heart	241.5	210.3	255.1	229.9
2	Malignant Neoplasms	206.1	183.8	208.7	204.0
3	Cerebral vascular Diseases	58.6	46.6	60.9	56.8
4	Chronic Lower Respiratory Diseases	50.2	43.2	55.8	45.2
5	Accidents (Unintentional Injuries)	46.6	38.1	54.6	40.9
6	Influenza and Pneumonia	27.9	20.3	29.5	26.5
7	Diabetes Mellitus	26.6	24.5	26.6	26.6
8	Alzheimer's Disease	21.2	22.9	18.6	23.8
9	Nephritis, Nephrotic Syndrome, and Nephrosis	19.8	14.3	19.9	19.7
10	Septicemia	16.7	11.2	15.6	17.8
	All Other Causes	192.5	183.6	186.6	198.6
	All Causes	907.7	798.8	931.8	889.8

[1] Rank based on number of deaths among Arkansas residents.

[2] Cause of death is based on the International Classification of Diseases, Tenth Revision, 1992.

[3] Final 2005 Arkansas mortality data provided by Arkansas Department of Health - Center for Health Statistics.
http://healthstat01/scripts/broker.exe?_service=default&_program=arcode.main_welcome_live.sas%20%20

[4] Preliminary 2005 U.S. mortality data provided by National Center for Health Statistics.
http://www.cdc.gov/nchs/data/hestat/preliminarydeaths05_tables.pdf#B

[4] www.arminorityhealth.com/pdf/arracialethnichealthdisparitystudy.pdf AR Racial & Ethnic Health Disparity Study Report
[5] http://www.unitedhealthfoundation.org Accessed October 2008

Healthy People 2010
The Arkansas Department of Health released the ADH Healthy People 2010 Health Status Report in April 2008.[6] This report focuses on health status indicators selected from among the goals outlined in Healthy People 2010. Within this Report, 60 selected health indicators were grouped into 12 categories. Data were examined to identify the current health status of three primary subgroups within Arkansas – Whites, Blacks and Latinos. These data showed that the most striking disparities for Whites were in the areas of **injury and tobacco.** For Blacks, the most striking disparities were identified in the areas of **cancer, family planning, heart disease, HIV, maternal/child health, nutrition, oral health and physical activity.** For Latinos, the most striking disparities were identified in the areas of **access to care, diabetes, and physical activity.**

Oral Health[7]
Oral health is an issue for persons of all ages, races, & geographic locations:

- 23% of adult Arkansans have lost 6 more teeth due to decay or gum disease
- Approximately 10% of children and adolescents screened during 2004- 2006 were referred for urgent dental care
- 57% of oral/pharyngeal cancers identified during 1999-2003 had spread to nearby tissues or to more distant sites before diagnosis
- 15% of children screened during 2004-2006 had sealants, compared to 21% of adolescents
- Approximately 60% of adults screened in 2004 reported receiving routine dental care, as did older adults screened in 2005
- 26% of adults currently use smokeless tobacco, compared to 14% of adolescents
- 21% of white mothers smoke during their 3rd trimester, compared to 9% of non-white mothers
- More than 60% of dentists practicing in Arkansas are located in just 8 of 75 counties
- Only 62% of the state's population is served by community water systems receiving fluoridated water

The ADH/Office of Oral Health screened more than 7,100 children enrolled in third grade in public schools throughout the state in 2003. Results indicated that:

- 61 percent had evidence of current or past cavities
- 31 percent had untreated cavities
- 21 percent were in need of routine care
- 6 percent needed urgent dental care
- The average child, at nine to 10 years of age, had three to four teeth that were missing, filled, or had current decay.

Behavioral Health[8]
Behavioral health is very often considered a missing piece in a state's rural safety net. While it is established that rural residents often seek care for mental health problems in primary care settings, or in some cases in a Community Mental Health Center (CMHC), lack of providers and lack of insurance may lead those with mental illness to the hospital emergency room (ER).

In Arkansas, noticeable financial strain became evident during the years 2001-2003 with the closure of 40% of local psychiatric beds. This financial strain was the result of several things: downsizing of the

[6] ADH Office of Minority Health and Health Disparities (April 2008) *Progressing Toward a Healthier Arkansas Healthy People 2010 Health Status Report*
[7] DHHS/Office of Oral Health (August 2006) *Oral Health in Arkansas*
[8] Presentation by Tammy Alexander, DHS, Division of Behavioral Health Services at the ADH Critical Access Hospital meeting September 2008

Arkansas State Hospital (ASH), an increase in the forensic population at ASH and an increase in adult indigent patients in local psychiatric units. This reduction led to more patients in need of an acute psychiatric bed ending up in jails, ERs and medical/surgical units of local hospitals.

Legislative action was taken to address this bed shortage. Legislation and appropriation of more than $11 million was authorized for the state's 15 community mental health centers to evaluate adults for whom admission to a publically funded bed was sought. With a reliable funding source in place, five years later approximately 50% of previously closed beds have reopened with more in the works.

According to *Population Profile: A Look at the Demographics of Arkansans In Need of Substance Abuse Treatment* (2004) completed by the Arkansas Department of Human Services Division of Behavioral Health Services Office of Alcohol and Drug Abuse Prevention

- 2002 NHSDA Treatment Estimates Indicates 202,000 Need Treatment (ages 12+)
- Nearly 298,000 Arkansans are in need of treatment – this is 14% of population age 12+
- Only 4.5% of the Arkansans that did need treatment received treatment

Other Issues Impacting Rural Health

Transportation Infrastructure

Arkansas' rural transportation system is decentralized and comprised of disparate parts. Most roads across the country are funded and maintained by different levels of government - cities, counties, states, and federal. Arkansas is no different. Availability of transportation in rural Arkansas, like other parts of rural America, is often limited if provided at all. In rural communities, working families rely on transportation not only to get to work, but also to access the supports they need to maintain employment. Many rural residents face longer commutes than their urban or suburban counterparts to their workplaces, child care providers, health care facilities, and job training sites. Longer commutes add to rural families' expenses, including added costs for the longer time their children spend in child care. In addition, the lack of transportation may be a disincentive to employment. Finding employment may take longer because of limited access to transportation. Workers holding multiple jobs may face even more complex travel challenges.[9]

The cost of providing public transportation in rural communities influences both the quality and accessibility of that service. Limited financial resources, low population density, and poor road conditions in rural communities contribute to the cost of providing service[10]. In addition, the expansion or addition of routes to meet the needs of workers who commute during off-peak hours can further increase the costs of public transportation services. For rural communities struggling to ensure adequate transportation is available to those who need it, finding resources to pay these costs can be difficult.[11]

Living in rural, medically underserved areas of the state, many patients need the support of a specialty or subspecialty physician miles and oftentimes hundreds of miles away from their hometown. Facing poverty and rural living conditions, transportation is overwhelmingly reported as a barrier to care. Many patients do not have their own transportation or a reliable source of transportation. Even if they have transportation to a needed medical appointment, they often do not have the child care resources available to them while they are a distance away from their home. Due to this barrier, many

[9] Federal Highway Administration (2001) *Planning for Transportation in Rural Areas* accessed October 2007 from FHA web site *http://www.fhwa.dot.gov/planning/rural/planningfortrans/index.html*

[10] Federal Highway Administration (2001)

[11] *Transportation Needs in Rural Communities* (2004) Pamela Friedman Rural Assistance Center (RAC) accessed October 2007

consumers living in rural areas of the state fail to follow-up on essential medical direction, advice, and appointments, thus contributing to Arkansas' poor health standing.

Health Insurance Coverage Patterns

Statistics show that individuals without health insurance are more likely to delay securing medical care when it is needed, are the recipients of more expensive and less efficacious treatments, and have a shorter life expectancy than those with health insurance coverage. Additionally, they are less likely to avail themselves of preventive care, are more likely to be hospitalized, and are more likely to be diagnosed in the late stages of disease, such as cancer, diabetes and heart disease.[12]

Nationally, of the non-elderly population aged 0-64 with health insurance, employer-sponsored health insurance covers 61% of the population, while 5% are covered by individual policies, 13% by Medicaid, and 2% by other public coverage or options, with about 18% uninsured or unaccounted for. In comparison, 53% of all insured Arkansans are covered by employer-sponsored health insurance, 6% are covered under individual plans, 16% are covered under Medicaid, and 4% are covered under other public health insurance plans and options, leaving 21% of Arkansas uninsured or unaccounted for between the years 2004 and 2006, according to the recently released CPS data and updated historical tables. Over this two-year time span approximately 502,000 (18.2%) of all Arkansans have had no health insurance – this is ~140,000 more uninsured individuals than during the 1999-2000 period.[13]

In Arkansas in 2005, only 40.8% of private sector establishments offered health insurance to their employees, compared with 56.3% in the US. (**Table 8**) In companies with less than 50 employees, only 22.2% of Arkansas firms offer health insurance to their employees, compared with 43.4% in the US. Nearly 75% (73.9%) of all businesses in Arkansas have less than 50 employees.[14]

Table 8: Insurance Coverage

	AR #	AR%	US#	US%
Under 100%	203,997	40%	16,619,984	37%
100-199%	162,199	28%	13,631,998	30%
--Low Income Rate	366,196	34%	30,251,982	33%
200% or more	134,769	10%	16,201,429	10%
Total	500,965	21%	46,453,411	18%

Arkansas: Uninsured Rates for the Nonelderly by Federal Poverty Level (FPL), states (2005-2006, U.S. (2006)[15]

Medicare Managed Care

Managed care is a complex system that involves the active coordination of, and the arrangement for, the provision of health services and coverage of health benefits. There are two types of managed care plans: Coordinated Care Plans and Private Fee for Service Plans. Coordinated Care Plans include Health Maintenance Organizations (*HMOs*), Preferred Provider Organizations (*PPOs*), Provider Sponsored Organizations *(PSOs*) and Special Needs Plans (SNP). In the Private Fee for Service Plans (PFFS) Medicare pays the plan a Medicare Advantage premium to cover Medicare benefits.

[12] Arkansas Center for Health Improvement (ACHI) *2005 Arkansas Fact Book: A Profile of the Uninsured*
[13] ACHI *Arkansas 2007 Health Insurance Market Update*
[14] ACHI *Arkansas 2007 Health Insurance Market Update*
[15] (Notes: For all topics based on the CPS on statehealthfacts.org, the grouping used for analysis is the health insurance unit (HIU), which groups individuals according to their insurance eligibility, rather than by relatedness or household.
For more details, see "Notes to Topics Based on the Current Population Survey (CPS)" at www.statehealthfacts.kff.org/methodology. Sources: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2006 and 2007 Current Population Survey (CPS: Annual Social and Economic Supplements).)

Medicare Part C – Medicare Advantage
As of January 2008 total of 51,707 Arkansans were enrolled in Medicare Advantage (MA), a 4.5% increase since October 2007. Humana has the largest enrollment (approximately 39%). Care Improvement Plus, a special needs plan, follows with 21% enrollment. At least 63% are enrolled in PFFS, the majority of which are rural residents (NRHA March 2008). The MA market penetration rate range is from a high of 22% (Crawford and Lee counties) to a low of 2% (Independence and Prairie counties). The state average is 9%.

Medicare Part D – Prescription drug assistance for the elderly
In Arkansas, there are 55 Medicare Prescription Drug Plans (PDPs) serving people with Medicare for 2008. Approximately 89% (89.5%) of people with Medicare in a Medicare Advantage plan with Drug Coverage (MA-PD) will have access to a plan with $0 premium. There are 136,767 people with Medicare who already qualify for extra help with prescription drug costs.

Health Costs - Medicaid[16] and Medicare Growth
Arkansas ranks 11th among states in the percentage of its gross state product spent on health care. [AR 4.1%; US 3.3%]. Personal healthcare expenditures for the state for SFY 2006 were $16.7 billion, of which Medicaid represented 18.8%. Overall State of Arkansas budget for SFY 2006 was $17.96 billion, of which 17.5% was Medicaid. Medicaid funding is shared between the federal government and the states. Arkansas funds approximately 25.98% of Arkansas Medicaid program-related costs; the federal government funds approximately 74.02%. In state fiscal year 2000 total Medicaid program costs were $1,631 (in millions) with an average cost per recipient of $3,271. By 2006, total program costs grew to $3,137 (in millions) with an average cost per recipient of $4,298. Projections for 2007 are that total program costs will grow to $3,357 (in millions) with an average cost per recipient anticipated to be $4,323.

The large elderly and medically indigent population in Arkansas contributes significantly to the utilization and spending for health services. Approximately 19% of the state's residents are 65 and over, which is the 22nd highest elderly population in the country.

[16] AR DHHS/Division of Medical Services Program Overview State Fiscal Year 2006

III. STATE HEALTH CARE RESOURCES

The information outlined below describes statewide resources and programs available to address the health issues of rural Arkansas.

Health Care Coverage

ARKids 1st [17]

The state's children's health insurance program, ARKids First, provides health care coverage to 382,000 children. About 11 percent (70,000 children) in Arkansas have no health insurance. Almost two out of three of these uninsured children (44,000) already qualify for ARKids First. Medical, dental, vision, hearing and mental health services, as well as prescription drugs and prenatal care, are provided for little or no cost. *ARKids First A* provides free care for a range of screenings and treatment services. *ARKids First B*, for families with slightly higher incomes, provides most of the same benefits and requires a small co-payment for some services.

Arkansas Advocates for Children, a non-profit, non-partisan, child advocacy organization founded in 1977, provides outreach for ARKids through the Arkansas Finish Line Coalition. This coalition is committed to completing three major goals: **(1) Reduce the number of uninsured children below 200% of the federal poverty line from 44,000 to 22,000**; **(2) Expand coverage from 200% to 300% of poverty line; and (3) Develop a buy-in program for children in families with incomes above 300% of poverty.** Established in May 2008, the coalition will increase ARKids enrollment numbers by working with various community organizations that interact with families who might be eligible for ARKids.

Medicaid Case Management/Care Coordination[18]

Arkansas has a single Primary Care Case Management (PCCS) program. For SFY 2006, there were 391,548 in Medicaid PCCM – ARKids A, B, and ConnectCare. According to the most recent Arkansas Medicaid Program Overview for 2006, 27% of all Arkansans are served by Medicaid. Sixty percent (60%) of all babies born to Arkansas residents are covered by Medicaid and 75.4% of all nursing home residents in 2006 were Medicaid eligible. However, only 14% of Arkansans ages 20-64 years receive Medicaid services, most of those adults receiving Medicaid have disability services.[19]

ConnectCare provides outreach and education to Medicaid participants to facilitate Medicaid enrollment, primary care physician selection, and use of preventive services. Services are provided through the media, printed materials and 24-hour telephone access. Over 27,000 client telephone inquiries were processed for the quarter July-September 2008. The annual report for state fiscal year ending June 30, 2008 shows over 112,000 requests. Recently, ConnectCare began processing inquires regarding dental services. More than 8,800 requests processed in quarter ending September 30, 2008. No comparison reports are available.

Medicaid Waiver ARHealthNet

In December 2006, ARHealthNet began as a new insurance program designed to help qualified small businesses, with low income workers, provide an affordable package of health care benefits to their employees. ARHealthNet is available to businesses with 2 to 500 employees who have not offered a group health plan in the past 12 months or longer. The plan is only available to working Arkansans through qualified employers and is not available as an individual plan. This program was developed to

[17] Arkansas Advocates for Children http://www.aradvocates.org Accessed October 16, 2008
[18] Arkansas Advocates for Children http://www.aradvocates.org Accessed October 16, 2008
[19] ACHI *Arkansas 2007 Health Insurance Market Update*

specifically target small businesses where employee populations have incomes <200% Federal Poverty Level (FPL) statewide where there could be a coordinated effort between public title XIX, title XXI and private coverage. As of October 29, 2007, AR HealthNet has enrolled 1,987 members into the program.[20]

Arkansas Medicaid's Non-Emergency Transportation

Data for quarter April – June 2007

Table 9: Medicaid Non-Emergency Transportation

NET Region	Eligible Beneficiaries	Trips per quarter	# of Individuals
1	65,217	19,282	1,046
3	34,153	32,615	1,321
4	67,737	23,475	1,756
5	53,986	12,696	917
6	4,883	3,806	147
7	13,912	10,671	676
8	32,016	7,539	590
9	39,249	25,302	1,622
10	21,389	5,045	663
11	19,536	4,481	512
12	75,562	62,886	2,540

This program provides rides to and from some Medicaid-covered health care services. (**Table 9**) Each region (of which there are 11) has an assigned "transportation broker" available to assist in the scheduling of a ride to a medical appointment with a Medicaid provider.

Statewide Health Initiatives

Hometown Health Improvement

Launched in December of 1998, Hometown Health Improvement (HHI) is a community development initiative based on the community coalition model and has grown to include 73 local coalition groups and initiatives in each of Arkansas' 75 counties. (**See Appendix 4**) The program is designed to empower local communities to take ownership of health problems and identify and implement solutions that improve health. Programs at the community level address health concerns such as tobacco use, diabetes, CVD, nutrition, physical activity, and others as identified by the community through local health assessments. Led by regional and statewide staff, local HHI staff consists of health educators, community health nurses, and rural health specialists.

Arkansas Tobacco Settlement Commission

The Arkansas Tobacco Settlement Commission (ATSC) was created under the Arkansas Tobacco Settlement Proceeds Act of 2000, along with seven funded programs including the Arkansas Aging Initiative, Arkansas Biosciences Institute, College of Public Health, Delta Area Health Education Center, Department of Health's Tobacco Prevention and Cessation Programs, Department of Human Service's Medicaid Expansion Initiatives, and the Minority Health Initiative. The ATSC is charged with monitoring and evaluating the programs created through the Act. Arkansas is one of few states that chose to invest its entire share of the tobacco Master Settlement Agreement funds in health-related programs.

Arkansas Oral Health Coalition

The Arkansas Oral Health Coalition began in 2001 as Arkansas' team at the National Governor's Association (NGA) Policy Academy on Improving Oral Health Access for Children. The academy team consisted of seven individuals representing: the office of the Governor, the Arkansas General Assembly, the Office of Oral Health, the Division of Medical Services, the Arkansas State Dental Association, the Arkansas State Dental Hygienists' Association and BHM International,

[20] ACHI *Arkansas 2007 Health Insurance Market Update*

Inc. The team worked with a faculty of national experts to develop Arkansas oral health goals in access, education, prevention and policy. To continue the academy efforts, the team invited other interested parties and expanded over the subsequent 3 years to what is now the Arkansas Oral Health Coalition, Inc. The Coalition has adopted and trademarked the slogan "**SMILES: AR, U.S.**"

Legislative Changes

Childhood Obesity Act

Act 1220 of 2003 created the Child Health Advisory Committee to address childhood obesity and develop statewide nutrition and physical activity standards. The Committee meets monthly and has made initial policy recommendations to the State Board of Education and the State Board of Health.

The goals of Act 1220:

- Change the environment within which children go to school and learn health habits
- Engage the community to support parents and build a system that encourages health
- Enhance awareness of childhood obesity to mobilize resources & establish support structures

Arkansas Clean Indoor Air Act

The Arkansas Legislature enacted the Arkansas Clean Indoor Air Act (Act 8 of 2006) to protect workers and citizens in Arkansas from secondhand smoke in the workplace and in public places. In Arkansas, secondhand smoke is the third-leading cause of preventable death with approximately 575 Arkansans dying each year from someone else's smoke. Since its inception, the ADH has processed 457 workplace exemptions and investigated 249 initial complaints of violation of the law.

Arkansas Protection from Secondhand Smoke for Children Act

The Arkansas Legislature enacted the Arkansas Protection from Secondhand Smoke for Children Act (Act 13 of 2006). This Act protects young children from secondhand smoke by making it a primary offense for persons to smoke in vehicles where children, who are less than six years of age and weigh less then 60 pounds, are restrained in a child passenger safety seat as required by Arkansas law.

Disaster Preparedness

New and persistent health threats that challenge the abilities of our existing, local and state public health infrastructures are becoming more common. Coordination of the public health system is critical to adequately prepare for and respond to bioterrorism, natural disasters, infectious disease outbreaks, and other public health emergencies. Representatives from hospitals, public health, Community Health Centers, and local emergency management just to name a few, work in unison to be prepared for a disaster. Program components include preparedness planning, surveillance and epidemiology, laboratory capacity, health alert network, risk communication, and education and training. In November 2007 local health units and volunteers immunized over 100,000 people over a 3-day period. It was the largest mass vaccine dispensing exercise in the nation.

Health Information Technology

Arkansas has significant issues regarding health information technology (HIT) that other, more urbanized areas usually don't experience. According to U.S. Census data, Arkansas is one of the "least wired" states in the nation. Since over 70 percent of Arkansas counties are considered rural, a significant number of residents are affected by this lack of implementation of HIT. In 2005, Arkansas Foundation for Medical Care (AFMC), the state's Quality Improvement Organization (QIO), conducted an environmental scan of Arkansas hospitals to glean substantive information of the current status of health information technology. At the time the scan was done, very little computerized

physician order entry (CPOE) and medication bar-coding were in place; while at the same time, electronic ordering, nurses notes, and viewing of lab or x-ray results was happening in approximately 60% of all hospitals. Data regarding home health was not collected during this scan. Presently (and this number fluctuates occasionally) there are approximately 16 Home Health Agencies using telehealth equipment.

The 2006 Technical Assistance and Services Center (TASC) survey of 19 Arkansas Critical Access Hospitals showed results[21] that demonstrate the critical need for Arkansas to develop a plan to promote health information sharing.

- Although 84% of these hospitals have some funding included in their budget for purchasing information technology, only 68% of them have a formal IT plan
- Only 16% of hospital information systems are connected electronically to physician offices, clinics, or long-term care facilities or share clinical data electronically with other hospitals
- 95% of hospitals surveyed do not use electronic medical records
- 58% of hospitals do not share clinical data with selected other departments within the hospital

The Doctors' Office Quality Information Technology (DOQ-IT) pilot project was an 18-month Special Study designed to improve quality of care, patient safety and efficiency for services provided to consumers by promoting the adoption of Electronic Health Records (EHR) and information technology in primary care physician offices. Arkansas was one of four states (including California, Massachusetts and Utah) that piloted the DOQ-IT project through CMS beginning in May 2004. Arkansas' participation in this pilot, led by the Arkansas Foundation for Medical Care (AFMC), resulted in the development of free statewide resources available through AFMC to primary care physicians' offices with eight or fewer physicians interested in pursing electronic health records (EHR). These resources include help in evaluating the needs and capabilities of the physicians' practice; guidance in evaluating an appropriate EHR system; and support in refining processes to improve efficiency and patient safety.

TeleHealth and TeleMedicine in Arkansas

The **Statewide Interactive Compressed Video Network** provides access to real-time, interactive education and training programs and video conferencing through all the UAMS Area Health Education Centers (AHEC), plus more than 50 rural hospitals, community health centers, local health units, clinics, schools, and universities. Medical consultations, consumer health education, and health professional training courses are extended to many areas of the state that would not otherwise have access. Many programs are streamed, allowing Internet access to the programs. The entire network in Arkansas is based on industry standards, utilizing T1 transmission, with open architecture allowing for interoperability and scalability.

- ❖ Through compressed video, the UAMS Rural Hospital Program has grown from 13 patient care consultations in 1995 to 5,665 in 2007
- ❖ 8, 264 Teleradiology consults have been done from January 2007 – October 2007, with an average number of 918 teleradiology consults per month
- ❖ Patient Care Services provided to nearly 6,000 Arkansas citizens
- ❖ Consumer Health Education services provided to more than 2,000 Arkansas citizens
- ❖ Staff Development services provided to more than 10,000 Arkansas citizens

[21] http://www.ruralcenter.org/hit_profiles/ar Rural Health Resource Center Technical Assistance Services Center

Telemedicine has reached remote, rural corners of the state where specialty and subspecialty care were once unavailable. An example of telemedicine is the 'Antenatal and Neonatal Guidelines, Education, and Learning System' (ANGELS) Program at the University of Arkansas for Medical Sciences. ANGELS utilizes many different applications of telemedicine, a 24-hour call center and evidence-based guidelines to deliver best practices to high risk obstetric (OB) patients statewide. In a joint effort with UAMS, one southwest Arkansas local health unit provides high-risk OB patients access to the ANGELS program, thus reducing their need to travel to Little Rock. Additionally, this local health unit clinical staff (Registered Nurse Practitioners) is able to receive monthly high-risk OB training without leaving the local health unit.

Presently, Arkansas is home to three statewide telehealth networks: ADH, UAMS, and Baptist Health, among a number of smaller, private networks. The Arkansas Hospital Network links 85 hospitals in the state with T1 lines and video conferencing equipment which allows them to receive simultaneous updates during a disaster from ADH, the Centers for Disease Control and Prevention (CDC), Homeland Security, Arkansas Department of Emergency Management (ADEM), etc. It also allows hospitals in a particular region to conduct meetings, drills and training.

These three telehealth networks represent all areas of the state, serving consumers on a variety of levels including emergency preparedness (earthquake, pandemic flu, chemical spill, etc.), high-risk pregnancy consultation, diabetes self-management, health care education, home health, cardiology, psychiatry, and a number of other diverse medical applications. The networks also serve to educate providers across Arkansas, with health care meetings, continuing education opportunities, and other collaborative uses of teleconferencing. The co-existing networks have served many patients throughout Arkansas, yet these networks all function separately from one another, serving the same target population with needed services.

Delta Rural Hospital Performance Improvement Program

An additional resource available to Arkansas' small rural hospitals located in the Delta area comes from the Delta Rural Hospital Performance Improvement (Delta RHPI) Program. Implemented in 2001 and funded by the federal Office of Rural Health Policy (ORHP), this program assists 28 Arkansas hospitals in the Delta to:

- Improve financial, quality and operational performance through comprehensive performance improvements assessments and consultations
- Help build state and regional capacity by providing ongoing assistance
- Collect and display tools and information that focus on improving performance

IV. PROFILE OF RURAL HEALTH SYSTEMS IN ARKANSAS

Arkansas Rural Health Facilities

The following section describes the types and numbers of rural health facilities in Arkansas that comprise the rural health infrastructure. Programs aimed at improving rural health services are also described in some detail to include recruitment and retention programs as well as programs aimed at developing and supporting rural health networks.

The State of Arkansas is committed to assisting rural communities in determining the best course of action in planning and developing rural health systems, including plans that improve access to health services, reduce duplication of services, and networking services and facilities where appropriate, with the ultimate goal of providing a "coordinated community-based continuum of care".

Profile of Arkansas Hospitals

According to the most recent (2008) Arkansas Hospital Association statistics,[22] there are 108 hospitals across the state. They include 47 general acute care community hospitals, 28 Critical Access Hospitals, 10 long term care hospitals, eight psychiatric hospitals, seven rehabilitation hospitals, three specialty surgical hospitals, two Veterans Affairs hospitals, as well as a pediatric hospital, a cardiac hospital and a women's hospital. These hospitals provide a total of more than 12,000 beds.

Forty-six counties are served by a single hospital. Twenty-one counties – almost 30% of all counties in the state – do not have ready access to a hospital. Four community hospitals have closed since 2004.

Critical Access Hospitals

As a result of the Balanced Budget Act (BBA) of 1997 and reauthorization as the Medicare Modernization Act (MMA) of 2003, significant changes have occurred over the last ten years in the financing of health care in response to public and private sector concerns over the growth in healthcare expenditures (**See Appendix 5**).

The biggest change was the designation of Critical Access Hospitals which provided small rural hospitals cost-based reimbursement as opposed to reimbursement through the prospective payment system (PPS). The MMA of 2003 authorized 101% reimbursement for reasonable and allowable costs. In Arkansas, Medicaid pays rural hospitals at 100% of reasonable and allowable costs.

For rural providers, these changes have been particularly significant. On a daily basis, many small rural hospitals face obstacles that make them financially vulnerable, and the constant changing of financing mechanisms impact their ability to continue to provide access to certain services. These hospitals are more reliant on government payers and often have a much higher proportion of uninsured and underinsured patients.

In Arkansas almost 80% of patients seen in CAH are Medicaid or Medicare beneficiaries. As for Medicare participation, as of 2005 Arkansas had nearly 490,000 Medicare beneficiaries representing 17% of the state's total population. Of this total, 27% are dual eligibles for Medicare and Medicaid.

[22] AHA Annual Report 2008 www.arkhospitals.org/Misc%20PDF%20Files/2008%20ann%20rpt.pdf

Additionally, our small hospitals are consistently challenged to reduce their operating expenses and services to match reduced reimbursements and in some cases, providers have eliminated services or the facility has closed altogether.

Rural Hospital Utilization
The total number of hospital discharges for 2006 was 430,103 vs. 74,889 in 1997 - an increase of 474%. The average charge per discharge was $18,141 (a 122% increase from 1997) and an average length of stay of 5.1 days, which has remained constant from 1997. For patients 65 and older, the number of discharges was 162,271 (a 495% increase) accounting for 45% of charges and an average length of stay of 2.2 days compared to 7 days in 1997.

Based on annual data from 2006 Arkansas Hospital Discharge Data System—

- There were 3,311 Inpatient Medicaid discharges
- There were 17,722 Inpatient Medicare discharges
- Total Medicaid patient days was 12,539
- Total Medicare patient days was 67,109
- The proportion of Medicaid as a percentage of pay source distribution was 12.5%
- The proportion of Medicare as a percentage of pay source distribution was 66.9%
- Uncompensated care accounted for 7 percent of all charges ($169,103,973)

University of Arkansas for Medical Sciences
The University of Arkansas for Medical Sciences (UAMS), the state's only medical school, is part of the University of Arkansas System. UAMS has more than 2,500 students in six academic units: the Colleges of Medicine, Pharmacy, Nursing, Health Related Professions, and Public Health and the Graduate School. UAMS also has more than 700 resident physicians completing their training at UAMS or at one of the eight Area Health Education Centers around the state. UAMS employees nearly 1,150 physicians who provide medical care to patients at UAMS and its affiliates - Arkansas Children's Hospital and the VA Medical Center.

UAMS/Area Health Education Centers
Area Health Education Centers (AHECs) have served for 34 years as the primary outreach arm of UAMS. The Arkansas AHEC Program was established in 1973 with six centers located in strategic locations throughout the state, including Fayetteville, Jonesboro, Pine Bluff, El Dorado, Texarkana, and Fort Smith. In 2001, the Delta Health Education Center, based in Helena, became the state's 7th full AHEC; and in 2007, the North Central AHEC, based in Mountain Home and Batesville, became the state's 8th AHEC.

Other highlights of the Arkansas AHECs include:

- The AHECs employ more than 600 paid faculty and staff, including nearly 100 Physicians.
- Over 500 volunteer clinical faculty members are actively involved in the clinical education of family medicine residents and health professions students in the AHEC programs across the state.
- Arkansas AHEC programs have been the primary provider of family physicians in the state of Arkansas for more than three decades. AHEC residencies have 140 residents in training annually, averaging 44 graduates each year who are Board Eligible in Family Medicine.
- A total of 613 AHEC trained family physicians practice in 123 Arkansas communities, including 70 of the state's 75 counties**;** 73% of all AHEC residency graduates have remained in Arkansas to practice, with 42% of them practicing in towns of less than 15,000 population.

- The AHECs provide training for approximately 300 Medical students, 300 Nursing students, 30 Pharmacy students, and 90 Health Related Professions students annually.
- Each year, the AHECs arrange Rural Preceptorships for 60-70 entering second- and third-year medical students to work with primary care physicians in small towns of less than 15,000.
- The AHECs annually provide rotation sites for approximately 80% of the UAMS junior medical school class to complete their Junior Clerkships in Family Medicine.
- Between 60-65% of the Senior Medical School class completes a Senior Elective/ Selective and/or an Acting Internship in one of the AHECs each year.
- The AHEC Medical Libraries supply library resources to programs, institutions, health professionals, and other individuals throughout Arkansas, serving as regional medical and health professional information specialists, serving over 59,000 patrons statewide annually.
- The AHECs are known and respected as the state's regional resources for quality continuing professional education programming. In 2006-07, 25,686 multidisciplinary providers across the state attended 1,646 continuing education courses offered by AHEC; 75% of those attending were rural physicians. The AHECs are accredited providers of continuing education credits.

UAMS Partnerships

Arkansas AHEC Programs are very dependant on affiliated community hospitals, volunteer faculty, and a vast network of collaborative partners including private clinics, health departments, community health centers, mental health facilities, social service agencies, chambers of commerce, local businesses, and various vocational/community colleges and universities statewide. Through community partnerships, the vision and emphases for each center's programs comes from within the target area, ensuring that programs are appropriately developed and matched with the specific resources and needs of the respective region.

Another key to *Regional Programs* is its strong emphasis on multi-disciplinary and interdisciplinary training which involves close collaboration with the UAMS Colleges of Medicine, Nursing, Pharmacy, and Health Related Professions, as well as other colleges, universities, and community and regional organizations throughout Arkansas. The AHEC environment is committed to promoting interdisciplinary training, with MD and DO physicians, PharmDs, Nurse Practitioners, Social Workers, and various Allied Health professionals working closely together both in their education and training roles, as well as in their clinical practice roles.

The AHEC Family Medicine clinics provide a statewide network of UAMS-affiliated patient care centers, encompassing a diverse patient mix, from prenatal to geriatrics. These realities provide a broad range of clinical experiences for pre-doctoral students and offer a diversity of patient panels and demographics that result in a rich mixture of opportunity for faculty development and research initiatives. Several key existing partnerships include:

- *The UAMS Donald W. Reynolds Institute on Aging* has established a network of seven satellite Centers on Aging located geographically across the state, operated in partnership with their regional AHEC programs. These Centers place older Arkansans and their families, many who reside in rural areas, live in poverty, and suffer from poor health, within a 60 mile radius of expert interdisciplinary geriatric care and world class education.
- The AHECs also enjoy a close working partnership with the Veteran's Administration Healthcare System**.** In 1998, AHEC Northeast (Jonesboro) became the first federally recognized Community Based Outpatient Clinic at an Arkansas AHEC, and the second such clinic opened at AHEC South

Arkansas (El Dorado) the following year. These clinics have allowed Veterans from outlying regions of the state to access quality health care closer to home.

- The Hispanic population in Arkansas increased by 337% between 1990 and 2000. The AHEC program once again set the standard for addressing the most pressing health professions needs, by establishing the state's first Medical Interpreter Training Program to train medical interpreters, as well as educate health professional students and residents in cultural competency and ways to effectively communicate with their non-English speaking patients.
- In 1993, UAMS formed an international affiliation with the Volgograd Medical Academy**,** in Volgograd (formerly Stalingrad), Russia. This affiliation resulted in establishment of a Department of Family Medicine in the Volgograd Medical Academy, and their first family medicine residency program began in September 1995.
- The AHECs, in collaboration with the Arkansas Medical MENTOR Partnership, offer a two-week summer program for high school students called Medical Application of Science for Health (M*A*S*H) and a one-week program for junior high students called Community Health Applied in Medical Public Service (CHAMPS). These enrichment programs use hands-on experiences to help integrate classroom science skills with health sciences in a professional setting, and to encourage students to consider health careers. More than 400 students participate in these popular programs annually.

UAMS/College of Medicine Rural Practice Programs

Arkansas state law has created three programs in an effort to recruit physicians to rural communities in Arkansas. The first of these programs, created in 1949, is the Rural Practice Scholarship Program. This program provides loans that are converted to scholarships when the physician practices in rural communities in Arkansas. This program, while still in existence, was not successful in recruiting physicians to rural areas. Less than 50% of students were returning to rural Arkansas to practice.

The Community Match Program was created in 1995 to support an increase in the number of physicians returning to rural areas to practice. In this program, a medical student chose a community and this particular community provided funding along with some state funding. Medical school and residency training combine for a total of seven years before the student is able to set up a practice in their match community and work to convert the loans to scholarships. This long period of time between commitment and consummation led to numerous defaults. The program was ended in 2007 and no new students have been added since the 2006-2007 academic year.

The Community Match Physician Recruitment Program (Act 1058) was created in 2007 as a means to replace the original Community Match program. This program allows physicians who are in their residency or have completed their residency to return to a qualified rural community in Arkansas and receive funds for loan repayment from the Community and the State with each year of service. The program provides a maximum of $80,000 (split 50/50 between state funds and community funds) for four years of service.

Student applicants must be interviewed by the Board to be admitted to the program. These programs serve the student by funding part of their education and they serve rural Arkansas because physicians return to those communities to practice. An average of seven new people is added to one of the programs each year, with an average of 28 participants in the programs in any given year. The success rate of the three combined programs has historically been around 80%.

Central Arkansas Veterans Healthcare System
Central Arkansas Veterans Healthcare System (CAVHS) has two hospital campuses. Located in both Little Rock and North Little Rock, CAVHS anchors a broad spectrum of inpatient and outpatient healthcare services, ranging from disease prevention through primary care, to complex surgical procedures, to extended rehabilitative care. CAVHS serves as a teaching facility for more than 1,200 students and residents enrolled in approximately 90 educational affiliates; its principal affiliate is the University of Arkansas for Medical Sciences.

With four Community-Based Outpatient Clinics, a Home-Based Primary Care Center, and a Drop-In Treatment Center for homeless veterans in downtown Little Rock this system is reaching out to veterans across the state.

The John L. McClellan Memorial Veterans Hospital is a 500 bed, eight-story facility which opened in 1984. It is the largest Veterans Administration hospital in the country in the number of patients admitted each year. It is immediately adjacent to the UAMS campus and serves as one of its major teaching facilities. The hospital provides acute care at the primary, secondary, and tertiary levels in Medicine, Surgery, Neurology, and Rehabilitation, and serves as a regional center for cardiology and cardiovascular surgery.

Community Health Centers[23]
Arkansas Community Health Centers (CHCs) and their Primary Care Association, Community Health Centers of Arkansas, Inc. (CHCA) share a vision where every Arkansan has equal access to total health care, striving for 100% access and 0% disparities. CHCA promotes and facilitates sharing resources, works with collaborative partnerships, and provides technical assistance to aid in expanding health care services. Currently, there are 12 federally qualified health centers (FQHC) operating 58 clinics in Arkansas, mostly located in rural and/or underserved areas (**See Appendix 6)**. CHCs' annual operating budget is over $63 million.

CHCs offer comprehensive primary medical, dental and mental health services; x-rays and laboratory testing; and, affordable prescription drugs under the 340B plan and indigent drug programs. In addition, CHCs offer enabling services such as case management, transportation, outreach, patient education, translation/ interpretation, community education, environmental health risk reduction, and eligibility assistance.

In 2006, Arkansas CHCs served as the health care homes for over 120,000 individuals and recorded close to a half of a million patient visits, including over 40,000 dental encounters. Approximately 47% of the patients were uninsured, 22% Medicaid, and 14% Medicare patients. Slightly over 25% of the patients last year were children and youth, whereas 11% represented older adults aged 65 and older. Over 33% of the users were women of childbearing age.

CHCs' workforce includes 690 health professionals and paraprofessionals. Each CHC has at least one physician, totaling 63 full-time equivalents (FTEs). There are 27 Advanced Nurse Practitioners/ Physician Assistants and approximately 120 RN/LPNs. Some of the CHCs have dentists (15 FTEs) and dental hygienists. Some CHCs have psychologists.

[23] All data derived from Uniform Data Set (UDS) is available on-line at www.chc-ar.org

CHCs participate in the Health Resources and Services Administration / Bureau of Primary Health Care's Health Disparities Collaborative (HDC). This project requires a FQHC to choose at least one condition that it will track within a formalized protocol. The patients' progress and outcomes are monitored throughout time to demonstrate improvement. All the FQHCs in Arkansas track at least one condition. Last year, conditions followed include diabetes, cardiovascular disease, and depression, totaling 14,000 patients. As an example, in January 2007, over 4,000 diabetic patients had their HbA1C levels tracked. Future initiatives may include asthma, well-child, and cancer. In addition to participating in the HDC, centers also participate in the State-Based Chronic Illness Collaborative.

Rural Health Clinics

Arkansas currently has 64 Rural Health Clinics (RHC). A rural health clinic is a special clinic that is staffed by a registered nurse practitioner with advanced education and clinical training in a special healthcare area. The nurse practitioner is recognized as an expert nurse and serves as the regular healthcare provider for children and adults during health and illness. The practitioner has strict supervision by a physician.

RHC may be a public or private, for-profit or not-for-profit entity. There are two types: provider-based and free-standing. Provider-based clinics are those clinics owned and operated as an "integral part" of a hospital, nursing home or home health agency. Free-standing RHC are those facilities owned by an entity other than a "provider" or a clinic owned by a provider that fails to meet the "integral part" criteria.

Charitable Clinics

The Arkansas Association of Charitable Clinics (AACC), founded in 2004, is a public-benefit corporation, nonprofit, 501c3 tax-exempt organization that (a) promotes access to basic compassionate primary health care services for the underserved/indigent population of Arkansas, (b) provides networking and educational opportunities among the association members, in order that member organizations may create a strong organizational structure and provide for efficient and effective health care services to their target populations, and (c) to augment and support existing health care service providers to promote the well being of the underserved/indigent population. The mission of AACC is to improve the healthcare of the people of Arkansas who are unable to afford the cost of care by supporting and facilitating the development of community-based charitable health clinics.

There are 26 AACC clinics located in 22 counties **(See Appendix 7**). Typically, clinic patients must have incomes below 200% of the Federal Poverty Guidelines, no health insurance, no Medicare, and no Medicaid. Clinics provide a wide array of primary healthcare services including those typically provided in a Family Practice Physician office, dental services, prescription medicines, refractions and glasses, medical appliances & supplies, laboratory services, counseling and support groups, and referrals for services not offered at the clinic.

In calendar 2006, AACC clinics provided:

- Medical Patient Visits – 69,297
- Education Patient Visits – 3,827
- Prescriptions – 157,122
- Prescription Value - $17,681,960
- Drugs Purchased - $438,946
- Medical Volunteer Days – 7,349
- Non-Medical Volunteer Days – 15,935

Public Health
Public health is what we as a society do collectively to assure the conditions in which people can be healthy. Public health addresses the health of the population as a whole rather than medical health care, which focuses on treatment of the individual person.

Public health:

- Prevents epidemics
- Protects against environmental hazards
- Prevents injuries
- Promotes and encourages healthy behaviors
- Responds to disasters and assists communities in recovery
- Assures the quality and accessibility of health services

There are 87 full-time local health unit sites across all 75 counties, with regional offices that serve as administrative centers. Each health unit functions under the direction of the State Board of Health, whose members are appointed by the governor. The responsibility of the State Board of Health is to ensure that public health policies and procedures are carried out in each county. Local health unit employees are employed by the Arkansas Department of Health to perform duties related to sanitation, immunization, health promotion and education, community development, direct care, disease surveillance and disease outbreak in their respective county.

There are more than 1,300 personnel employed in local health units to provide public health services and more than 3,500 personnel (employees and contracts) providing in-home services. Since these units receive only a small percentage of their revenue from state and local governments, they generate fees for many of the services they provide.

Local health units in Arkansas, as across the nation, have struggled to define their role in the ever-changing health care environment. They understand the need for, and the philosophy behind the shift to core public health functions, but there is little funding to provide core functions. To shift away from the provision of services which have traditionally funded core public health functions without other sources of revenue for these services is not an attractive option. Moreover, managed care and blurring of the roles for health care providers are viewed as additional threats to local health units.

Local health units lack recognition by the general public for the role they play in providing for the health of the public. Their activities in the areas of immunization, sanitation, regulatory functions, and provision of care to the indigent are usually identified by the public, but their day-to-day contribution to the health of all state residents is not as well known.

Behavioral Health
Public and private behavioral health care facilities and programs in Arkansas provide an array of prevention, treatment and rehabilitation services to individuals who have been or are at risk of developing mental illness, developmental disabilities or chemical dependency. The public behavioral health system currently serves about 60,000 individuals annually.

Mental Health
The Mental Health Council of Arkansas (MHCA) is a non-profit organization governed by a board of directors with a representative from each of the participating community mental health centers and their affiliates. The MHCA is dedicated to improving the overall health and well-being of the citizens and communities of Arkansas. With over 50 psychiatrists and over 2,000 health care professionals, participating members of the MHCA provide comprehensive services specially designed to meet the individual behavioral healthcare needs of Arkansas' citizens. The backbone of the public behavioral health system include 15 community mental centers, one state-operated psychiatric hospital, and six centers for people with developmental disabilities. All members are accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF) or the Joint Commission.

Chemical Dependency
The Office of Alcohol and Drug Abuse Prevention (ADAP) within the Department of Human Services Division of Behavioral Health Services (DHS/DBHS) is the single state agency responsible for funding of alcohol and drug prevention and treatment services, providing court ordered treatment, licensing of alcohol and drug treatment programs, the State Methadone Authority, administering the Drug and Alcohol Safety Educational Programs and providing training to the field of substance abuse.

Prevention services are funded through 27 grants to local programs, communities and other organizations to provide prevention services. In addition to these local grants, ADAP funds 13 Prevention Resource Centers in the state that are designed to respond to the needs of a particular geographical area to support its prevention initiatives. Prevention services also work with businesses to provide prevention activities in the workplace to help businesses deal with substance abuse. ADAP licenses 49 alcohol and drug treatment programs in the state and approves Opioid Treatment Programs. The office is responsible for overseeing the provision that persons court ordered to treatment meet the requirements of the Substance Abuse Commitment Law. Alcohol and drug treatment services are provided through various funding sources. During SFY 2007, 69,228 persons received mental health services through DHS/DBHS mental health programs and 16,077 received substance abuse prevention and treatment services.

ADAP funds the following treatment services:
- 13 Regional Alcohol and Drug Detoxification Centers
- 14 residential/outpatient treatment centers
- Court Ordered Referral and Treatment Program
- 5 secure treatment beds for court committed clients from outside Central Arkansas Area
- 8 outpatient programs
- 7 Special Women's Services programs

Intermediate and Skilled Nursing Facilities
The total percentage of Arkansas residents aged sixty-five and older has increased from 15% in 1995 to an estimated 19% in 2006. This age group is expected to be 589,480 of the projected population of 2,933,935 (20%) by the year 2010, increasing the demand for long term health care access and ways to address issues such as falls, diabetes, heart disease, mental health and immunization.

Based on information from the DHS Office of Long Term Care Licensing, there are 282 Long Term Nursing Facilities in Arkansas. These nursing homes have a total of 26,892 licensed beds.

Assisted Living Facilities
The Assisted Living Federation of America defines "assisted living" as a special combination of housing, supportive services, personalized assistance and healthcare designed to respond to the individual needs of those who need help with activities of daily living. Supportive services are available, 24 hours a day, to meet scheduled and unscheduled needs, in a way that promotes maximum dignity and independence for each resident and involves the resident's family, neighbors and friends.

Act 1230 of 2001 authorized the creation of assisted living in Arkansas. To provide assisted living in Arkansas, one must:

- Obtain a Permit of Approval from the Arkansas Health Service Permit Agency, and
- Obtain a License from the AR Department of Human Services Office of Long Term Care

As of October 2007 Arkansas there are 14 Level I and 27 Level II assisted living facilities providing care to Arkansas residents.

Personal Care
Personal Care homes provide alternative, community-based care for individuals who are dependent upon the services of others by reason of physical or mental impairment and who may require limited and intermittent nursing care, including those individuals who qualify for and are receiving services coordinated by a licensed hospice. Such care and treatment requires a living environment for such persons which, to the extent practicable, will approximate a normal home environment.

Current regulations governing this issue are overseen by the Department of Human Services Office of Long-Term Care. There are currently 4,585 personal care beds in 130 personal homes in Arkansas.

Rural Health Networks
The Federal Office of Rural Health Policy (ORHP) defines a network as a collaboration of 3 or more separately owned entities coming together to address jointly identified needs. In Arkansas, there are numerous rural health networks meeting this definition functioning in various stages of development.

The Arkansas FLEX program defines a rural health network as a referral network comprised of a CAH and its tertiary facility. Currently, there are 28 referral networks involving the state's CAH and their identified tertiary care facility. These 28 referral networks outline a patient referral and transfer process; development and use of communication systems; and the provision of emergency and non-emergency transportation.

In addition, each CAH in a network must have an agreement for credentialing and quality assurance with at least one hospital that is a member of the network, or with a Quality Improvement Organization (QIO) or equivalent entity, or with another appropriate and qualified entity identified in the rural health care plan for Arkansas.

Hometown Health Improvement coalitions are located in each of the state's 75 counties. These health coalitions are locally established and work within the community to identify priority health issues and implement strategies to improve the overall health of the community.

Rural Health Personnel
Physician shortages in rural areas have troubled Arkansas for more than two decades as Arkansas remains on the threshold of a health professional crisis with the continued rise in age of the state's

nurses and physicians. Health care providers are aging as "baby boomers" reach retirement age and then leave the workforce. A study conducted by UAMS Rural Hospital Program during 2007[24] reports the number of expected vacancies within the next five years to exceed 20,000 in primary care physicians, physician specialists, nursing, allied health professions, and pharmacy.

The Office of Rural Health and Primary Care and the University of Arkansas for Medical Sciences Rural Hospital Program work collaboratively to assist community efforts to alleviate health care provider shortages especially in the area of primary care. Primary care is defined as physicians practicing in the following areas: family practice, general practice, internal medicine, obstetrics/gynecology, and pediatrics.

Rural primary care physicians are older than their urban counterparts. The mean age of primary care physicians in rural Arkansas counties for 2006-07 was 51.5 years of age compared to 49.5 years of age for urban Arkansas counties. This is true for dentists as well with 25.9% of dentists in rural Arkansas age 60 and older compared to 21.5% of dentists practicing in urban areas. The age of nurses is basically the same in both areas (48 years of age). **(Appendix 8)**

Health Professional Shortage Areas

The Federal Division of Shortage Designation (DSD), Bureau of Primary Health Care, Health Resources and Services Administration, U.S. Department of Health and Human Services, designates an area as a Health Professional Shortage Area (HPSA). This designation is usually a geographic area consisting of a county or a sub-county area and is based on the ratio of primary care physician providers to the population. The Office of Rural Health and Primary Care compiles the information and forwards it to the DSD. The state also provides data to DSD to determine dental and mental health HPSAs.

Currently, Arkansas has:

- 49 primary care HPSAs
  - 27 total county HPSAs
  - 19 partial county HPSAs
  - 1 facility
  - 2 state prisons
- 14 dental HPSAs
  - 12 total county HPSAs
  - 2 partial county HPSAs
- 69 mental health HPSAs
- 73 designated medically underserved areas (MUA)
  - 59 total county MUA
  - 14 partial county MUA

(**See Appendix 9)**

Without adequate access to dentists and dental hygienists, preventive and restorative care is not possible. Unfortunately, data indicate that many Arkansas residents have limited access. Current data from the Arkansas State Board of Dental Examiners indicate that there are 1,145 dentists living and practicing in the state. The majority (82%) are general dentists. The remainder are specialists. Only about one-third of the state's dentists participate as providers for the Medicaid program (ARKids First

[24] The report can be accessed at http://rhp.uams.edu/HealthWorkforceVacancyStudyReport2007_11.pdf

programs, part A and B). These dental practitioners are not, however, equally distributed across the state. Four counties do not have any dentists at all, and seven counties have 40 or more dentists.

The distribution of dental hygienists is similar. The 1,039 dental hygienists are also, not unexpectedly, more like to be located in more urban areas.

Arkansas does not have a dental school. Arkansas supports the education of 30 dental students per year in dental schools in surrounding states, such as Tennessee and Texas. Arkansas does have two dental hygiene training programs and one accredited dental assistant program within the state.

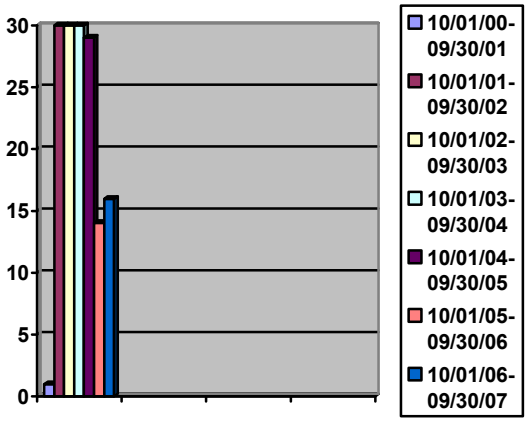
National Health Service Corps

The National Health Service Corps (NHSC) is an active Federal program that offers loan repayment and scholarship incentives in exchange for a service obligation to a facility that meets Federal guidelines and is located in a Health Professional Shortage Area (HPSA). The guidelines were revised in 1997 to make the utilization of this program more accessible for facilities throughout Arkansas.

There are currently 44 NHSC providers serving the state with 155 sites requesting NHSC providers.

J-1 Exchange Visitor Program

Also known as the Conrad State 30 waiver program, this program has become an important planning tool for states in facilitating the recruitment and retention of physicians to designated medically underserved area. The J-1 Visa program provides options to international medical graduates who seek graduate medical education (i.e., residency or clinical fellowship training) or employment in the profession to remain in the United States. During FFY 2007, 16 physicians were placed in Arkansas through this program. Historically, the chart below tracks foreign physician placement over the past seven years.



Emergency Medical Services

The Arkansas Emergency Medical Services (EMS) system is patterned after the Federal Emergency Medical Services System Act of 1973 which provided additional guidelines and funding for development of regional EMS systems. In 1975, the Arkansas State Legislature passed Act 435, The Emergency Medical Services Act, which created as the lead State EMS Agency the Section of EMS and Trauma Systems (SEMS&TS) within the Arkansas Department of Health (ADH). There is one central office with 13 staff members providing direct services to emergency medical services organizations throughout the state.

Emergency Medical Providers and Personnel
As of October 22, 2007, there were 204 EMS agencies licensed by the SEMS&TS with 5,920 personnel certified as Emergency Medical Services Personnel (EMSP) to staff over 633 EMS vehicles. There are 311 EMT-Basics, 3,908 EMT-Ambulance, 161 EMT-Intermediate and 1,539 EMT-Paramedics providing out-of-hospital care. Even though there are more basic life support providers, over 74% of the licensed ambulance services provide advanced life support care. However, often times, basic life support squads are located in the more rural areas of the state and require assistance from advanced life support services from other parts of the state.

Emergency Medical Services Training and Education
The ADH – SEMS&TS is responsible for certification and training of all EMS personnel. Rural geographical areas are especially dependent on these technicians for front–line, life sustaining emergency medical services. The Division licenses each training site and certifies all EMT-Instructors. There are currently 235 certified EMT-Instructors training EMTs at 33 training sites licensed at various levels; Basic (Level 1) –17, Intermediate (Level 2) – 2, and Paramedic (Level 3) – 14. However, recruiting and retaining EMTs in the rural areas who are willing and able to maintain the training and certification for EMS work is a continuous challenge for the small and volunteer ambulance services.

Arkansas does not regulate or recognize First Responders. They do obtain training; however, the educational courses could range from a few hours up to 48 hours. Arkansas recommends that instructors utilize the National Standard Curriculum for First Responders. If this curriculum is utilized, the course must be at least 48 hours in length.

Emergency Medical Vehicles
Nearly 34% of the 609 ground ambulances presently operating in the state are more than seven years old. Approximately 65 to 70% of all licensed ambulance services in Arkansas are privately owned. Most of the ambulance services operate in rural sections of the State where local resources and medical facilities are limited. Currently there are 23 volunteer ambulance services within the state; all provide Basic Life Support care. They usually provide services in extreme rural areas that do not have a high call volume for ambulance need.

In addition to the licensed ambulance services in Arkansas, there is continuous support of the Arkansas EMS System from the ambulance services bordering our State. If an emergency occurs that an Arkansas ambulance service can not handle and needs additional ambulances, they can call for mutual aid from surrounding ambulance services. If a major disaster occurs, we would utilize the Emergency Management Assistance Compact to obtain additional resources from other states.

Most EMS air transports in Arkansas are provided by 24 licensed services (private and hospital based) which provide a combination of fixed wing and rotary aircraft. Seventeen air transport services are located throughout Arkansas and seven additional services are in the following states: one service in Texas, one service in Louisiana, one in Tennessee, three in Missouri, and one service in Oklahoma.

Medical Oversight and Communications
Each licensed advanced life support and enhanced basic life support ambulance service must have an Arkansas licensed physician as its medical director. Each medical director is to provide medical oversight in the form of skill reviews and protocol development. Also, EMS personnel may contact

any licensed health care facility to receive on-line medical control. Each facility is equipped with communications equipment capable of communicating with the ambulance crews in the field.

Facilities and Trauma Systems

Arkansas does not have a designated trauma center or a statewide trauma system. In 1993, Act 559 (*The Trauma System Act*) was signed into law. This Act gave the Arkansas Department of Health – Section of Emergency Medical Services and Trauma Systems the authority to develop a statewide trauma system and to promulgate Trauma System Rules and Regulations. In 1996 a Statewide Trauma System Workgroup was created to address several issues regarding the statewide Trauma System. The 43-member workgroup consisted of 24 hospital administrators and representatives, 13 physicians and six Arkansas Department of health staff. The workgroup was divided into three separate committees: 1) Triage/Transport Protocols; 2) Trauma Facility Resource Standards; and 3) Hospital Trauma Registry. Also, a separate 22-member EMS workgroup was created to review and comment on the Triage/Transport Protocols. As a result of the workgroup effort, the division completed a draft version of the Trauma System Rules and Regulations. This document was then approved by the Governor's Advisory Council on Trauma Systems and the Board of Health through the administrative process for final approval.

Over the years the Section of EMS and Trauma Systems has utilized grant funding to review hospitals for possible trauma level I, II, III, or IV designations. The lack of any incentive to seek designation has seriously hindered the process and the Section is working diligently with the Trauma Advisory Council to seek state funding for the program. This funding, when obtained, could help hospitals, ambulance services, physicians, and even rehabilitation centers across the state to take care of patients in a timelier manner. Training grants and incentive programs could be utilized to help the smallest facility take care of the patients that they are capable of managing and transport more seriously injured patients to a higher level of care. Such funding could also be used to collect data on patients for the planned trauma registry, which would allow the state to examine successful transport and allow designated facilities to work on quality assurance.

EMS Licensure and Certification

In order to operate an ambulance service in Arkansas, the service must be licensed by the DEMS&TS. Licensure requirements include obtaining a service license, paying all appropriate fees and having each vehicle inspected and registered. The inspection ensures that each ambulance operating in the State has the required equipment as identified by the Governor's EMS Advisory Council.

In order to provide out-of-hospital care with a licensed ambulance service, the EMS personnel must be certified by the DEMS&TS. There are six EMS Specialists that cover the state from the office. Their primary responsibilities include testing, ambulance inspections, processing of initial EMT certification materials and reviewing EMT recertification paperwork to ensure that all recertification requirements have been met. No one is issued a certification until all requirements are met as established by State law and the current EMS Rules and Regulations.

Data Collection for Emergency Medical Services

In 1995 the DEMS&TS obtained a grant to develop a State-wide data collection system. Using an EMS software package and scannable bubble forms, the Division is able to collect data on every out-of-hospital run made. This data is stored in the Division and is accessible to anyone doing research. More recently, the system has been expanded to allow for the download of data from services not using the bubble forms, including electronic data collection. In the near future, this system will be expanded

to include data collection on certified EMS personnel which will help expedite the certification and recertification process currently followed.

V. ARKANSAS OFFICE OF RURAL HEALTH AND PRIMARY CARE RURAL HEALTH PLAN OF ACTION

Arkansas Office of Rural Health and Primary Care

The Arkansas Office of Rural Health and Primary Care is located within the Arkansas Department of Health's Center for Local Public Health, Hometown Health Improvement Branch. In 1997, a Steering Committee was formed to aid in the implementation of the FLEX program and to work collaboratively to address issues and challenges to access to quality health care in rural Arkansas. The Steering Committee has grown over the course of the program to include not only the original members of the committee, such as Arkansas Department of Health, Arkansas Hospital Association, and Arkansas Farm Bureau for example, but now also includes the administrators of the CAH and representatives from other entities with a strong interest in rural health issues (**See Appendix 10**).

Medicare Rural Hospital Flexibility Program

As part of the Balanced Budget Act of 1997, Congress authorized the Medicare Rural Hospital Flexibility Program (FLEX). The Health Care Financing Administration, now known as the Centers for Medicare and Medicaid (CMS), published regulations implementing FLEX in August 1997, and the program began in October 1997. It was reauthorized in 2003. FLEX created the Critical Access Hospital (CAH), an acute care rural facility that provides outpatient, emergency and limited inpatient services. A CAH became recognized as a new provider type eligible for Medicare reimbursement.

Hospitals eligible for designation as a CAH are located in rural areas, are licensed for 25 beds (acute care or swing) or less and provide an average length of patient stay of up to 96 hours. Additionally, a CAH may establish distinct part units for psychiatric and rehabilitation care with a maximum of ten beds for psychiatric care and ten beds for rehabilitation care. These additional beds are excluded from the 25 total bed count limit. A CAH networks with a tertiary hospital, through a signed agreement, for patient referral and transfer. A CAH is reimbursed by CMS at 101% of allowable costs for inpatient and outpatient services provided to Medicare beneficiaries. In Arkansas, a CAH is reimbursed by the Division of Medicaid at 100% of allowable costs for inpatient and outpatient services provided to Medicaid patients. As of May 2008 28 rural hospitals have been designated as Critical Access Hospitals **(See Appendix 4**).

Process for Plan Revision

ORHPC held three work group sessions during the time period October 21, 2007 – February 13, 2008 (**See Appendix 2**). Extensive discussion ensued regarding the most effective and efficient ways to address strategies to achieve these goals and to identify barriers inhibiting their success. The information outlined below is designed to provide guidance and direction to ORHPC in the continual successful growth and development of the Arkansas FLEX Program.

Arkansas Goals

The goals for the next three to five year period are:

- Enhance access to health and health services for rural Arkansas residents
- Improve quality of care in rural Arkansas
- Enhance emergency medical services
- Strengthen rural health networks
- Strengthen existing CAH and other rural hospitals

Goal One: Enhance Access to Health and Health Services for Rural Arkansas Residents

According to The Commonwealth Fund *National Scorecard on U.S. Health System Performance* (2008) overall performance has not improved since the first national scorecard was issued in 2006. Of greatest concern, access to healthcare significantly declined. Inadequate access can result in inefficient care from avoidable complications, reliance on emergency departments for primary care, duplication of services, and failure to follow-up on test results or preventive care. This revised rural health plan will assist ORHPC in addressing health care access in rural Arkansas.

Objective 1: Increase the availability of health care services in rural areas

- Establish a collaborative partnership to recruit allied health professionals to rural areas
- Work with AHEC to move family practice rotations into rural hospitals and communities
- Explore ideas for shared manpower in rural areas
- Better utilize existing non-traditional health care providers in the provision of primary care (local health units, optometrists, dental hygienists, etc.)
- Increase in-state training for medical professionals
- Increase the number of professionals placed through scholarship and loan repayment programs (NHSC, J-1, and H1-B)
- Explore funding resources for dental health education in Arkansas

Objective 2: Improve communication, funding and marketing services for primary care in rural areas

- Explore expansion of "grow your own" programs such as MASH and CHAMPS in public schools across the state
- Review current funding practices and legislation supporting training and education of health professions to require those persons receiving funding to practice in Arkansas
- Collaborate with optometric and other professional associations and rural health providers to promote access and education materials
- Increase public awareness regarding shortage of allied health professionals
- Increase incentives for health professionals to stay in Arkansas

Objective 3: Increase the number and expand capacity of Community Health Centers to provide services in rural areas

- Increase utilization of CHC or CHC look-alikes to meet community needs
- Increase funding from state and federal sources

Barriers

Registered Nurse Practitioners (RNP) receive a lesser reimbursement payment for services rendered than that received by physicians, contributing greatly to RNPs being recruited by specialists to their practices. Community education is needed to make a paradigm shift from physicians to RNPs providing primary care in rural Arkansas. Often times RNPs experience feelings of isolation. They are in need of technology and tele-medicine to aid them in bridging the gap with physicians.

There is a prevailing school of thought that having insurance equates to access and no insurance equates to no access. These assumptions are not necessarily true. A lack of transportation greatly hinders access to care, whether an individual has insurance or not. Even with insurance if there is no access to affordable drug coverage, most individuals do not follow through with post-office care and treatment. The overall health care status of Arkansans is poor and more preventive health care education is needed.

Goal Two: Improve Quality of Care in Rural Arkansas

Quality of care is best measured by tracking the extent to which patients receive care that is effective, safe, well-coordinated, timely, and patient-centered. Arkansas hospitals have advanced their focus on patient safety and express a strong commitment to participation in multi-hospital benchmarking initiatives. Patient safety is also included in the Centers for Medicare and Medicaid Services 9th Scope of Work that provides direction to the Quality Improvement Organizations across the country. Arkansas' QIO, Arkansas Foundation for Medical Care, works closely with the ORHPC and FLEX program.

Objective 1: Increase availability and use of electronic records

- Explore feasibility of common system within and between institutions and primary care providers
- Develop exchange agreements for sharing medical records
- Explore potential funding avenues to support development of a common system

Objective 2: Increase the number of hospitals participating in multi-hospital benchmarking initiatives

- Improve training regarding benefits of benchmarking participation
- Identify funding streams to support participation in these initiatives
- Identify avenues to access quality data to create benchmark report cards
- Explore collaboration between hospitals
- Identify common system and measures

Objective 3: Strengthen CAH transfer policies

- Conduct an assessment to determine extent of the problem
- Establish a standard statewide transfer policy
- Develop agreements
- Increase the number of designated trauma centers in the state

Barriers

The most identified barriers involved health information technology (HIT). It is important to recognize that the use of HIT is one of many available tools to help hospitals address quality, but it is not the complete solution. This is compounded by an overall lack of funds to fully develop HIT across the state.

Goal Three: Enhance Emergency Medical Services

Rural EMS is changing. Recruiting and retaining a qualified EMS workforce is an uphill battle, with increased demand for services (driven by an aging population), an insufficient workforce, and a dwindling number of potential volunteers in many areas. Not only are rural areas scrambling to find personnel, they are also struggling with a workforce that often does not have the necessary skills to appropriately treat patients who have complex and life-threatening medical needs. At the same time, expectations and requirements have increased, with all-hazards preparedness, pandemic disease and other preparedness requirements. Arkansas has a documented paramedic shortage and work is being done to identify issues that greatly impact the recruitment and retention of qualified individuals practicing in rural Arkansas.

An organized Trauma and EMS system has been proven to reduce the incidence of death and long-term disability from traumatic injury. Establishing a formal process for State designation of trauma

centers is the keystone for developing a more cohesive and effective State trauma and EMS system through which trauma-related morbidity and mortality can be lessened.
Small rural hospitals are crucial to the success of the trauma system, yet Arkansas does not have a statewide trauma system or any designated trauma centers. A Level III or IV trauma center represents the levels more typically attainable by CAH. The development and use of a statewide trauma system plan is important for CAHs because the trauma system provides guidance on comprehensive system development; allows for local trauma system variations based on assessment results (e.g. rural versus urban needs and resources); demonstrates an all-encompassing, inclusive methodology, ranging from injury prevention activities to pre-hospital trauma care, acute care facilities, and post-acute rehabilitation; and, it is increasingly required in order to be eligible for some Federal funding opportunities.[25]

Entities committed to a strong rural EMS structure are actively engaged in preparation for the upcoming legislative session to begin in January 2009 and are revising Arkansas' Rules and Regulations for Trauma Systems.

Objective 1: Support Establishment of a Statewide Trauma System

- ❖ Identify consistent funding streams to support the system
- ❖ Pass comprehensive statewide trauma system legislation
- ❖ Assess personnel needs to adequately support system
- ❖ Assess roles of rural hospitals in statewide system
- ❖ Assess payment structure to rural hospitals for ER care
- ❖ Explore creation of a pilot trauma center designation program

Objective 2: Increase number of and compensation to rural EMS providers

- ❖ Increase the number and availability of training programs across the state
- ❖ Develop workable strategies to reduce turnover
- ❖ Develop a comprehensive recruitment strategy

Objective 3: Strengthen EMS Medical Direction

- ❖ Establish standard job descriptions and oversight guidelines for EMS Medical Directors
- ❖ Assess current credentialing policy and identify opportunities for improvements
- ❖ Develop an certified emergency nurse education program
- ❖ Increase recruitment of neurologists and other trauma specialty physicians

Barriers

Resources are scarce to expand personnel and their training. Although the reliance on an unpaid workforce yields cost savings for rural areas, these areas also experience problems maintaining around-the-clock coverage, since many of the volunteers have other jobs and are not available on a "24/7" basis. These other commitments also make it difficult for some people to keep up with their training requirements. Many rural areas are experiencing an attrition of paramedics to the field of nursing where annual salaries are much higher and there is no career ladder for paramedics. A provider shortage in Arkansas makes it more difficult to secure care for transfers after patients are stabilized. Many rural hospitals' emergency rooms are used as after-hours primary care clinics. This non-emergency use of ERs places great financial strain on small rural hospitals.

[25] *EMS in the Flex Program 2008-2010 State Strategic Planning: Trauma System*

Goal Four: Strengthen Rural Health Networks

In Arkansas, networks come in many sizes and shapes, with differing purposes and aspirations. To be successful, networks must respond to the needs of their members and the communities they serve, bringing together rural providers and their community partners to address health care problems that could not be solved by any single entity working alone. Additionally, it is important to note that networks grow along a continuum of stages: formative, evolving, and mature. This is also true for health coalitions, a type of network much more loosely organized, but nevertheless functioning as a vehicle to bring together community partners to assess and prioritize community health care needs.

Objective 1: Enhance collaboration through use of technology

- ❖ Identify funding streams to increase availability and connectivity among stakeholders
- ❖ Expand use of existing conferencing capabilities among providers
- ❖ Provide useful tools such as video phone directories to providers
- ❖ Increase awareness through education and public relations
- ❖ Establish a data warehouse for collection of shared tools and resources

Objective 2: Increase collaboration with and among rural health stakeholders

- ❖ Increase public awareness of successful Hometown Health models
- ❖ Increase use of Memoranda of Agreement between local network partners
- ❖ Develop an umbrella organization to support rural health networks

Objective 3: Enhance support for rural advocacy

- ❖ Explore feasibility of holding a networking conference
- ❖ Establish a rural health/primary care advisory committee
- ❖ Research successful model programs in other states

Barriers

Arkansas does not have a statewide rural health association to speak as one voice for rural Arkansas. Interests of rural Arkansas communities are addressed through numerous membership organizations, such as the Arkansas Hospital Association, the Primary Care Association, the Arkansas Farm Bureau, the Arkansas Association of Charitable Clinics, just to name a few. A lack of available technical assistance and training in the areas of interactive technology contributes to the difficulties in relationship development and resource sharing.

Goal Five: Support of Existing CAH and Eligible Hospitals

Arkansas has 28 critical access hospitals and six additional small rural hospitals that are not CAH. Located in 28 counties across the state, the majority of these 34 hospitals are not unlike the rest of the nation - hospitals showing their age and in dire need of new equipment, additions, renovations, and in many cases, total facility replacement.

As a result of a strategic profile completed in April 2007 of all 28 CAH by the UAMS College of Public Health, six indicators of financial challenges faced by our CAH emerged:

- CAH patient revenue from Medicaid/Medicare combination is 79% (non-CAH 65.1%)
- CAH net income (2003) shows a range from -$1.6M to +$864,000
- CAH patient revenue (2003) shows a range from $5.4M to $38.6M
- CAH contractual allowances as % of revenue (2003) shows a range of .122 to .571
- CAH operating margin (2003) shows 55.5% with a positive margin

- CAH patient care margin (2003) 18.5% with a positive patient care margin

Objective 1: Facilitate improvement of financial performance of Arkansas' rural hospitals

- ❖ Explore local, state and federal legislative changes to improve reimbursement
- ❖ Improve level of Grantsmanship within hospitals
- ❖ Explore state and federal support for capital needs
- ❖ Reduce Arkansas' uninsured/underinsured population

Objective 2: Improve overall business operations of Arkansas' rural hospitals

- ❖ Develop and implement practice management improvement
- ❖ Improve HIT connectivity
- ❖ Develop a rural hospital consortium or network
- ❖ Improve accuracy of coding/billing for services

Objective 3: Increase public awareness of hospitals' role in community

- ❖ Promote rural hospitals as community 'economic engines'
- ❖ Explore Rural Hospital newsletter to share successes
- ❖ Increase level of public knowledge regarding Medicare and Medicare Advantage
- ❖ Strengthen education provided to hospital board members
- ❖ Promote hospital community benefits to constituents

Barriers

Finding funding for capital projects is a major concern for many rural healthcare facilities. Arkansas hospitals are no different. Arkansas' funding structure is inadequate to support its small rural hospitals. Many of Arkansas' hospitals are in need of capital financing to replace aging physical plants, operating systems and clinical equipment to meet the increasing safety and environment of care standards required by state, federal and accrediting agencies. In addition, there is a mandate for health information technology systems (HIT) that provide financial, clinical and operational interfaces required by state and federal agencies as well as third party payers and liability insurers. The Health Insurance Portability and Accountability Act (HIPAA) of 1996 contains provisions that mandate the adoption of Federal privacy protections for individually identifiable health information. All of these requirements are and will have a major impact on hospitals and health systems due to the cost. The need for capital outside of existing institutional financial reserves to address these mandatory upgrades is additionally impacted by the continuing decrease in third party reimbursement for clinical services and reduced returns on investment income.

Conclusion

The health of Arkansans depends, in part, upon access to basic health care—especially in the more rural areas of out state. Health disparities, most often associated with urban ethnic and racial populations, persist in rural America as well. In Arkansas, geographic isolation, socio-economic status, health risk behaviors, low health literacy, limited job opportunities and fewer health care providers – both in primary and specialty care - contribute to health disparities in rural communities. The Office of Rural Health and Primary Care provides planning, technical assistance and resources to improve access to health services across Arkansas. During Year 1 of the upcoming Flex grant cycle, ORHPC will work to address the identified needs and barriers contained in this plan by assembling a team of rural partners to initiate steps necessary to launch implementation. This implementation plan will guide ORHPC through years 2 and 3 of the current FLEX program.

APPENDIX 1. 2004 Office of Rural Health and Primary Care Strategy and Business Plan

Arkansas Office of Rural Health and Primary Care
Strategy and Business Plan
June, 2004

Introduction

The Strategy and Business Plan for the Arkansas State Office of Rural Health and Primary Care (the Office) was developed during the spring of 2004. The project is being completed as part of a Federal Office of Rural Health Policy (ORHP) funded initiative with three other State Offices of Rural Health (SORH) in Virginia, Kansas, and Florida. This Plan may be modified based on additional input from other participating SORH. Although the Plan addresses some of the issues related to the Office's primary care role, it primarily concentrates on SORH functions and associated grant related expectations.

To date, the Office has sought input from individuals within the Office and other closely associated individuals within Arkansas Department of Health (e.g., representatives from Hometown Health), as well as from non-government affiliated individuals and organizations familiar with the Office's role in the State. These additional participants included representatives from a Critical Access Hospital, the Farm Bureau, the Arkansas Hospital Association, the Southern Rural Access Program, and the Arkansas Primary Care Association.

Planning discussions and analysis was facilitated by an independent consultant familiar with State Offices of Rural Health throughout the country and with Federal Office of Rural Health programs and grants, including the State Office of Rural Health program. These discussions were supplemented by a peer-review-site visit by the Director of the Oklahoma Office of Rural Health, who is also the former President of the National Rural Health Association.

Basic Roles and Functions

The SORH provides a diverse set of services and supports a variety of State and Federal rural health initiatives. There are several basic role expectations for State Offices of Rural Health that receive Federal funding, including the following:

Technical Assistance (core function)

Information Clearinghouse (core function)

Coordination of Rural Health Activities Statewide (core function)

Support for Recruitment and Retention Initiatives (a supplemental function basically done in conjunction with the Primary Care Office and focusing on primary care physicians)

Participation in Collaborative Relationships That Foster State-Federal Partnerships (supplemental function)

Demonstration of Leadership That Impacts State and Federal Policy Initiatives (Note: this last point is not defined in legislation or regulation, but has evolved as an unstated "desirable" role in most states.)

The approaches used by the Office to meet these expectations are extensively documented in the Office's annual application to HRSA for grant funding, in the FLEX Program grant, and it it grant applications as the Primary Care Office This detail is not repeated here. It is not the purpose of this plan to explore all aspects of the Office's functions, but rather to incorporate previous program development with the specific findings and recommendations outlined below. In addition to these above categories, the Office is specifically responsible for:

- Managing the application process for the annual FLEX Program grant and subsequent management of the program's implementation, including the development of associated projects with other organizations, as well as the dissemination of some grant funds directly to eligible hospitals

- Developing the State's application for the Small Rural Hospital Improvement Program (SHIP) program and management of the program's implementation, including the dissemination of grant funds to applicants in Arkansas

- Managing the dissemination of funds for the State's Rural Physician Incentive Fund Program and the Rural Health Services Revolving Fund Program (Note, both of these initiatives currently have no funds for new allocations.)

- Supporting other Arkansas State government offices/bureaus

- Providing comments (impact assessments) on various legislative bills effecting rural health care in Arkansas

- Supporting the work of non-governmental applicants for funding through Federal Office of Rural Health Policy/HRSA, Outreach and Networking grants and other grant programs (Note: this is most closely related to the Office's technical support function.)

Beyond the above activities, the SORH fulfills its objectives by serving as a "rural voice" within the Department of Health and as a participant in other forums, such as with the Arkansas Hospital Association and Primary Care Associations. It also provides an additional rural voice with other rural organizations such as the Farm Bureau.

The following sections highlight some of the Office's strengths and weaknesses/challenges. (These points are not all inclusive and are open to modification.)

Strengths

- The Office is very well perceived by those who have used its services and those in State government who may be aware of its role. Among participants, comments were very positive about the reliability of the Office's staff and its proactive support and advocacy for rural providers.

- The Office's staff is held in high regard; seen as knowledgeable, helpful, energetic, and very good at facilitating dialogue and getting multiple parties to work together. The Office is noted for conveying a very strong philosophy of advocacy for collaboration and partnership development among providers and other agencies.

- The Office has a considerable scope of activity (a diversified portfolio) and compares favorable with other State Offices of Rural Health. The Office has a progressive track record and is poised to do more for rural Arkansas. It demonstrates both flexibility and creativity in addressing immediate pressures.

- The Office has good working relationships with several organizations, e.g., the Hospital and Primary Care Associations. Some of the relationships have the potential for expanded development.

- The development of the FLEX/Critical Access Hospital (CAH) program has resulted in the designation of nineteen CAHs, with two additional applications in process and four potential applicants that may pursue CAH status during the next year. The Office is seen as being very proactive in the development CAHs. The Office has also been successful in developing and sustaining a forum for quarterly CAH meetings and joint CAH initiatives. CAH participation in this forum continues to increase.

- Rather than just a straight pass-through of funding to individual hospitals, the Office has used FLEX funding to support program and staff that assists all CAHs, the Hometown Health Initiative, and Emergency Medical Services. Examples include educational programs, quarterly CAH "user-group" meetings, the development of comparative clinical and administrative performance measures, a workgroup to discuss Telehealth and workshops on finance and operations. Much of this supportive activity is accomplished through outside contracting. Additional funds are allocated from the FLEX program to support community health planning thorough the Hometown Health Initiative and EMS training.

- The Office has made progress (e.g., with the CAHs) in developing performance measures. The Office addresses Quality Improvement (QI) through contracts with the Arkansas Foundation for Medical Care (AFMC.) All CAHs participate in this Quality Improvement Organization (QIO) project and sign participation agreements. The AFMC provides technical assistance through site visits, workshops and telephone support. There are quarterly QI meetings with CAH QI directors to review results. The AFMC collects data comparable to the JCAHCO Core Measures and results are benchmarked with CAH and other small hospitals. Definitive gains in quality are being identified.

- Recent initiatives to foster the development of "networks" of providers and other organizations to address regional needs have been increasingly successful and now provide experience on which to build additional efforts.

- In the context of Network development, the Office has been successful in helping to stimulate collaboration between CAHs and CHCs. This is very promising and strongly supported by the Primary Care Association. Two evaluations of this collaboration are currently being conduced by the National Rural Health Association and the Office of Rural Health Policy. The evaluations should provide additional insight to guide future actions.

- The Office continues to support the Southern Rural Access Program as it has invested grant funds in Arkansas initiatives, particularly in support of network development.

- The Office has been also been closely involved with the Mid-Delta Community Consortia, Arkansas' Delta Rural Development Network (ADRDN) HRSA Delta States grantee. (The Office Director sits on the Consortia Steering Committee.)

- Strategies are in place to foster the development of rural EMS infrastructure through the support of EMS training in Basic Trauma Life Support and Advanced Cardiac Life Support. The Office participates actively in EMS planning with the State's EMS Office.

- The Office has made efforts to integrate some of its functions with the Hometown Health Initiative (HHI) and provides financial support for community health planners and data support for HHI through the FLEX grant. CAH certification requirements specify that the CAHs will participant in HHI coalitions. Plans call for collaborative integration aimed at improved community engagement and health planning. (See simultaneous weaknesses identified below.)

- Additional FLEX resources have been allocated to the Office for the development of data systems and personal to support entities seeking to better understand their service area's "health" profiles and utilization patterns.

- There have been some recent efforts to assess the economic impact of health on rural counties using tools from the Rural Health Works program.

- The Office has worked with the University of Arkansas for Medical Services (UAMS) Rural Hospital Program on the development of strategies to improve rural workforce development through the Students Utilizing Community-Centered Education Systems (SUCCESs) program. This pilot program works with demonstration sites in the Arkansas Mississippi River Delta region and extends to four rural hospitals and six community health centers. The Office has provided some funding for this program.

- For the current year fiscal year the Office is responsible for identifying and/or management of rural grants worth $882,000 plus an additional $174,000 in primary care grants, obtained from Federal or other non-State budget fund sources, <u>not</u> including roll-overs from previous years for a total of $1,056,000. Using widely accepted economic multipliers, this non-State revenue generates approximately $2,112,000 of direct and indirect economic impact within Arkansas.

This amount does not include Network, Outreach, or other grants or additional Medicare reimbursement associated with CAH development.

Weaknesses and Challenges (for the Office and the State's Approach to Rural Health)

- The most significant weakness is the absence of State funding for the Office and the reliance on grant funds. There are no specific strategies in place for the Office to more strongly advocate for additional State funding. While an absence of State support also means that the State may be less likely to take issue with the Office's programs, it also means that the role of the Office is more subject to the ongoing availability of external funding, which may increasingly be at risk. (If the FLEX program funding was cut, the State could also say "Continue to fund the HHI planners but cut the Office staff.") The direction that the Office takes can also be unproductively constrained by the expectations funding sources.

- The Office has insufficient staff. The Office is poised to do more, but is hampered, if not blocked, by a lack of funding for personnel. (Note: more personnel would also require more space.)

- While unobligated funds from some programs (e.g., FLEX) have been "carried over" and have supported other programs, the inability to allocate the funds to increase the Office's staffing depth is unfortunate.

- While the diversity of the Office's efforts is on one hand a strength, the Office's staff is pulled in multiple directions, time is spread very thin on some initiatives, and some opportunities go undeveloped or underdeveloped. Travel time to rural areas exacerbates difficulties in getting out to many meetings and actively participating in local discussions.

- Given staffing limitations, the pressure to just keep up with the basics of the Office is intense (i.e., grant writing requirements, such as FLEX, required SORH functions, including grant implementation, and other programs such as SHIP.)

- Although a substantial amount of good work is being done, there is an absence Office and Departmental consensus around truly unifying themes or vision for the future.

- Although the State has a dated, rural resource plan, there is no comprehensive, contemporary Health Plan or Rural Health Plan for the State that guides decision making and resource allocation.

- It is difficult to advocate for staff or the re-channeling of funds to different applications in the absence of support for a clearly defined plan.

- The ability of the Office to fully develop its role and visibility within State government and to better define its relationship to other programs and divisions has been hampered by several departmental reorganizations.

- There is insufficient understanding of the Office's role and how it adds value within the Department and probably minimal awareness within the Governor's office and the legislature.

- Although the Office has many strengths and accomplishments it has taken a very limited approach to self-promotion.

- Although the State (and the Office) have made a substantial investments in the Hometown Health Initiative, community-level, collaborative health planning is still substantially underdeveloped and inconsistently implemented. Among the CAHs and other rural hospitals, support for this program, is highly variable but generally weak. This also appears to be the case for AHA and APCA/CHC support and involvement. Observations regarding HHI include the following: a) although there have been numerous successes, these "stories" are not well told; b) the planning model is excessively driven by the health risk screening tool approach; c) approaches to date may have provided too much community independence; d) the results have been highly variable; and e) the program would benefit greatly from developing a clear vision for future development and a clear program plan.

- In addition, the relationship between the Office (within its network initiatives and role with FLEX/Critical Access Hospitals) and the Hometown Health program is insufficiently defined; and roles, responsibilities, and funding rationale are confused.

- Although data support is improving, previous efforts by the Office and HHI have not been stellar. There is need to find and using data that matters.

- To date, the resources of the Rural Health Works program have not been optimally connected to the Office and the HHI.

- The Rural Physician Incentive Fund Program and the Rural Health Services Revolving Fund Programs are currently not funded by the State for new allocations. However, the Office has responsibility for continued monitoring of earlier funding.

- While it is positive that grantees within the State receive funding for various projects through the Delta Project and the Southern Rural Access Project, these funding streams are not always adequately coordinated with Office goals.

- Although there are positive relationships with the Primary Care Association and several individual Federally Qualified Community Health Centers (FQHCs or CHCs) these relationships are underdeveloped. (There are 10 CHCs providing care, in approximately 50 sites in Arkansas.) The APCA has a goal that its members will be the "provider-of-choice" for geriatric patients and that geriatric care is a major rural issue. While this goal may not be shared by all affected parties, it is imperative to connect these APCA plans and the strategies of the Office. Simultaneously more could be done to develop relationships with the approximately 75 Rural Health Clinics (RHC) in the State. Collaborative approaches should be pursued with CHCs and RHCs to foster quality enhancement, e.g., diabetes and cardiac care, and to identify and share "best practices."

- State Office programs lack adequate outcome measures. Progress is being made on the development of quantitative quality indicators. (Note: although better quantitative and qualitative measures are necessary, the demonstration of "outcomes" is to some extent related to underdeveloped storytelling and inadequate highlighting of SORH achievements, as well as

to underdeveloped communications strategies that are frequently compromised by staffing pressures.)

- Approaches for holding statewide forums for parties interested in rural health have been limited and inconsistent.

- There is no rural health association or comparable group in Arkansas.

- There are several other underdeveloped opportunities, including development of:

  - The Office's role in Telemedicine/Telehealth/distance learning

  - Linkages to the State's new School of Public Health

  - A more defined and substantive voice in rural workforce development (beyond the SUCCESs program)

  - The role to be played in addressing some targeted health issues such as physician needs beyond primary care, mental health and substance abuse, and dental care

  - Linkages to agencies and individuals trying to address economic development opportunities for rural communities

Some Guidelines for Addressing Identified Challenges and On-going Commitments
The following points (and others to be identified through upcoming discussions) may serve as basic strategies and guidelines for Office's programs and decisions.

- It is the desire of the State Office of Rural Health and the Office of Primary Care to be seen as one unified Office, not two separate functions.

- The primary strategy the Office is to create receptive environments for Office participation with rural providers and associated organizations and then to leverage this participation and available funding mechanisms to create effective partnerships in local, regional, and State settings. This seems to be a very fundamental yet not sufficiently or clearly stated philosophical theme

- The Office must continue to provide services consistent with its SORH, FLEX, and other grant expectations. Nonetheless there is flexibility in many of the grant parameters and grants can generally be structured to support Office strategies and program goals and not the other way around. Although the Office is driven to a considerable extent by Federal and State funding requirements and expectations, the Office has a desire to make its programs need/user/constituent driven.

- Some of the greatest successes are achieved at the community or network level with focused projects, strong community involvement, and targeted funding. Since the Office does not have sufficient resources to simultaneously work with every potential partner with the same

intensity, significant meaningful results may best be achieved by focusing on targeted initiatives with demonstrable potential for success. Current network development initiatives are examples of this focus. If the Office can sustain the successes, and incrementally build more successful examples, this strategy will breed additional success.

- Where possible, resource allocations strategies should be aligned to fund projects that advance the creation of strong partnerships. The Office has been making progress in this area, but there could be more conscious effort to channel several Office-defined funding streams to flow together and to working with other parties to encourage them to provide complementary funding to targeted initiatives.

- One way to think of the allocation of Office resources (dollars and time) is to think in terms of two pots, one for statewide initiatives and overall support for all rural constituents and one for targeted network/coalition/partnership development. The Office is moving in this direction.

- Federally funding programs through SORH have by their nature promoted greater emphasis on working with hospitals than with other organizations. One of the few philosophical (and appropriate) goals specifically stated in the Office's current grants is "to have Critical Access Hospitals become the core of the communities' systems of care." However, strong rural health strategies require looking beyond "hospitals" to the fostering of involvement of other key stakeholders, e.g. CHCs, RHCs. homecare providers, dentists, and nursing homes.

- Due to limitations on staffing and other resources, it will be increasingly important for the SORH to develop internal-Arkansas Department of Health (ADH) and external partnerships. His is particularly true with respect to collaboration with HHI and EMS. Coordinated "grant-seeking" strategies should complement such partnerships. The "leveraging" of resources should be thematic to the Office's objectives, actions, and relationships. However, it also must be recognized that grant seeking can be staff intense and that this approach may be limited unless additional resources can be secured to support this strategy. This resource strategy should be paralleled by greater efforts to evaluate the performance of grantees.

- In the absence of adequate staffing strategies, the Office has moved to expand outside contracting to meet some of its objectives. This approach seems to have been effectively used for such projects as the development of quality of care indicators with the Arkansas Foundation for Medical Care. However, the Office needs to be clear that its contracts are targeted to specific needs (consistent with the Office's vision and Plan) and that they are yielding demonstrable results of adequate value. The ability to evaluate, re-define goals and expectations, and modify approaches and contractual relationships is essential, but not strongly developed.

- The Office has sufficient credibility to be able to move towards greater advocacy on some issues, e.g., better defined relationships with Hometown Health and advocating for improved community health planning, expanded network development, and for CAH designation in some situations. However, the Office cannot push too hard for local change unless the community is ready or governmental change without adequate support.

- The Office can be a valuable resource to other Arkansas Department of Health divisions in an advisory role, contributing a rural voice to the efforts of others. It can also be effective in

helping to pursue rural-oriented grant funding. Additional grant funding might come to the Office itself but also to other divisions. Alternatively, Office support might be given to help other State offices to secure rural-related funding for their constituents, e.g., for rural mental health or dental services.

- The Office could more systematically "market" its capabilities and its potential involvement with others. There are underdeveloped opportunities for the SORH to promote greater internal and external multi-party focus on select rural issues.

- In order to accomplish many of its objectives and to achieve its potential, the Office requires a sufficient staff, a stable workforce, and staff who are knowledgeable about rural issues. Credibility, as a small Office, demands an investment in experienced staff. Dependable ability to respond to requests for SORH support and involvement (e.g., advisory role with various organizations) is essential. (Note: the Office is not deficient in the quality or credibility of existing staff, but sustained progress will demand not only retention but expansion.)

- The Office must be cautious not to create demands that it cannot fill. Future development must be managed within practical limits and the Office must make judicious choices regarding the scope of the initiatives it takes. It cannot take on all issues. Developing the ability to say "No" to requests for the Office's involvement and setting priorities within available resources is critical.

Action Steps for Addressing Fundamental Rural Health Issues and Services

There are numerous clinical services and health improvement strategies, which are fundamental to the development of sound rural health systems. Some of these fundamentals are appropriate for particular SORH focus. The following topics and suggested objectives provide a framework for the Office's Plan. These sections are followed by an outline of other supportive strategies and operational issues. (Note that these suggestions do not include all of the positive actions steps outlined in specific grants):

- Primary Care

  - Facilitate discussion of best practices for fostering closer collaboration among Rural Health Clinics, Federally Qualified Health Centers, and rural hospitals aimed at the development of shared community strategies. Consider a statewide conference on this topic.

  - Build on the results of the two current evaluations being done of CHA/CHC joint projects.

  - Continue to foster collaborative relationships with the APCA.

  - Evaluate options for more closely working with RHCs, including the development a forum that would foster ongoing dialogue with the Office.

- Hospital Services---Critical Access Hospitals and Other Rural Hospitals

  - Continue to sustain Critical Access Hospital Development but not to the exclusion of support for other rural hospitals

- Support additional hospitals that may be advantaged by CAH designation.

- Support improvements in individual CAH and other rural hospital strategic planning.

- Sustain and further promote regular meeting of the CAHs and the development of joint projects to meet shared needs and enhancing the sustainability of these hospitals. In particular, continue the focus on development of comparative quality and performance measures.

- Consistently advocate for CAH and other rural hospital involvement in community health planning.

- Further develop HUD 242 options.

- Reevaluate options for the Health Facilities Revolving Fund and the Rural Medical Clinic Revolving Fund. Consider development of a loan fund mechanism that would couple loan payback to recovery of the capital cost by CAHs through cost-based reimbursement.

- Network Development

  - Continue to foster the development of collaborative, multi-stakeholder networks, building on demonstrable, incremental successes.

  - Target two to four new network development initiatives per year. This approach will be quality, not quantity driven.

  - Develop approaches that assure close integration of HHI with network development.

  - Seek additional funding sources for network development and explore opportunities with governmental and non-governmental funding sources for channeling *existing* funding to targeted "ventures."

- Community Health Planning

  - Develop a shared approach to community health planning that integrates the needs of the HHI with the goals and resources of the Office.

  - Build one or more planning models that can be supported through work, deed, and funding by HHI, the CAHs, other rural hospitals, the AHA, the APCA, and other organizations such as the ACHI and the State's new Public Health School. (Note, while these models need to be flexible to accommodate individual community variations, greater common agreement on models and planning expectations is needed. Leadership needs to be cultivated around improved community health planning.)

  - Target community or network health planning initiatives in few communities where good, demonstrable, and potentially replicable results may be achieved.

- Develop enhanced approaches for interagency input and coordination with local planning processes to more comprehensively address the needs of rural communities.

- Assess how the Rural Health Work's models for community engagement and community health planning might support the community health planning initiatives. Tie this objective to expanding awareness of economic impact assessment.

- Consider how a combination of the current HHI toolbox, the RHW community planning toolbox, and enhanced data support could merge to provide a new support tools for community planning.

- Working with other parties, identify desirable access standards for rural health services, e.g., travel time, geographic access, and timeliness of access.

- Emergency Medical Services and Bio-terrorism

  - Assure that EMS development activities are closely coordinated with CAH, networking, and HHI initiatives.

- Quality Standards

  - In addition to current efforts with the AFMC, evaluate options for the Office to become more involved in rural, quality assurance/performance improvement strategies (e.g., comparative performance standards, linkage of quality standards to reimbursement, Institute of Medicine guidelines, Leap Frog initiatives, Joint Commission programs, Balanced Scorecard developments, and the identification of rural-specific data.)

- Various Other Fundamental Issues/Programs

There are numerous, health-related needs of rural populations that the Office of Rural Health should consider as it thinks comprehensively about rural Arkansas. However, the Office's direct responsibility for addressing these issues is limited. The Office should:

  - Work collaboratively with other State agencies, which have the predominant responsibilities; in a way that assures consideration of rural-specific needs. Examples include working with:
    - HHI on education
    - The Bureau of Oral Health Services
    - The Department of Alcohol and Substance Abuse
    - The Department of Mental Health
    - The Department of Volunteer Services (on faith-based initiatives)
    - Tobacco-settlement-funded coalitions

- Other Issues to Consider

  - Increase the Office's visibility with other organizations regarding workforce development issues.

- Increase the Office awareness of developing malpractice insurance issues and its visibility with other organizations regarding these challenges.

- Expand discussions focused on the needs of the rural elderly.

Addressing Other Supportive Strategies and Operational Issues

Staffing Strategies

- Develop a staffing strategy that will allow the Office greater depth and seek additional support within the Department.

- Failing more State funding, seek additional opportunities to build staff depth (e.g., new programs/grants that will build more critical mass.)

Contracting Strategies

- Further develop outside contracting capabilities including the Office's ability to evaluate contracting results and to modify strategies and agreements.

Additional Office Funding and Support Strategies

- Consider how supportive constituencies can advocate for expanded Office funding. Supportive groups would include the APCA, AHA, the Farm Bureau, the CAHs, RHCs, and the networks. Internal support for expanded funding must be build before pursing any external support.

- Consider the development of a State Rural Health Association that could advocate for expanded rural health resources, supportive rural health policies, and expanded Office resources, as well as serve as a forum for bringing together diverse rural health stakeholders. (Note: this would require clarity of expectations, careful planning, and the development of multi-organizational support.) Consideration might be given to a name such as "Institute for Rural Community Health Improvement" rather than just calling it an association.

Marketing/Story-Telling/ Promotion

- Develop an internal and external communications plan.

- Consider development of a stronger Office brochure and other supportive media tools.

- Move to expanded electronic communications techniques to improve timeliness and expand distribution and enhance website development. Consider enhanced web site development and communications needs in context of any developing rural health association's roles.

- Discuss the development a targeted information program for rural legislators (and associated staff) and if appropriate facilitate meetings of interested legislators to discuss rural health issues. Concentrate on the Office's "value-added" attributes.

- Consider a "What is the Office of Rural Health and what do we see as the issues?" briefing for Division Leaders, staff of the Governor's office, and other legislative staff.

- Piggyback promotion efforts and showcase partnerships with other organizations.

Educational Programming

- Expand educational programming related to rural quality issues, grant writing, select clinical topics, and the economic impacts of health on rural communities.

- Facilitate and sponsor an annual rural summit (possibly in conjunction with the creation of a Rural Health Association.)

Data Support

- Continue to develop the capability to provide data support to HHI, CAHs, Networks, RHCs and CHCs, e.g., for market share reports, designation activities, health needs assessments. Develop a strategy for working closely with the regional epidemiologists.

- Consider the development of a data workgroup, including the Office, the Arkansas Center for Health Improvement, HHI, PCA, AHA, Arkansas School of Public Health, and others to address some of these issues.

- Improve geo-coding of information so that the impacts of the Office on particular rural areas can be highlighted.

Expanding Grant Related Activities

- Continue and expand educational and technical support for communities and other organizations to develop grants and to improve their ability to effectively receive and use the resources.

- Assess current and future grant writing role with and for other State departments and with other organizations and the related ability of the SORH to help Arkansas obtain additional non-State-budget resources.

- Link the search for grants to expanded community health planning (e.g., grants to support health needs identified during community level planning.)

Development of a State Rural Health Plan

- Seek Departmental/Administration support for developing a Rural Health Plan. (Its value will need to be demonstrated and financial resource would need to be secured. External funding might need to be pursued.)

- Consider formation of a Rural Health Plan Development Advisory Committee.

Building Academic Linkages

- Continue, but reassess, current academic linkages and associated contracts.
- (Note: Current budget pressures on many academic institutions may make Rural-related research funding increasing attractive.)

- Assess how the Office's Plan will fit with plans for the Public Health School.

- Consider a rural academic and research agenda that is targeted to specific Office needs, e.g., such topics as rural disparities, quality standards, market research, health needs assessments, community planning, access standards, and community economic impacts.

- Seek to expand linkages between Arkansas's academic institutions and established, national, Rural Research Centers.

Economic Development

- Foster with the Hospital Association, the Primary Care Association, the CAHs and HHI, the advancement of shared understanding of health care as a critical component of rural economics. Promote this issue with the Governor and with rural legislators.

- Re-evaluate options for accessing the economic impact of health care on rural economies, including the development of additional in-Office data support capacity. Consider how to better use economic impact data in local health planning and communications strategies.

- Consider facilitating a small meeting of interested parties and the formation of a workgroup to address this opportunity.

- Work with the Rural Health Works and HHI to address education and training opportunities.

- Consider the feasibility of forming multi-organization/agency "SWAT teams" that would intensively work with targeted communities not only on health resource development by simultaneously on other aspects of rural community development. (This approach might be particularly relevant to those communities that have a Critical Access Hospital and which have engaged in community health planning.)

- Highlight the economic impacts of SORH programs, such as additional federal funding through the Critical Assess Hospital program, using the Federal ORHP/SORH economic quantification model.

Expanding Relationships with Agriculture

- Cultivate expanded relationships with the Farm Bureau, USDA, Arkansas Department of Agriculture, the Extension Service, and any rural development organizations to identify needs and to coordinate grant programs.

- Consider how a "package" of farm/agriculture-related health issues might be highlighted and addressed collaboratively with interested agencies. These topics could include:

- Farm injuries prevention and management strategies
- Assisting in meeting the needs of extension agents
- Occupational exposure prevention (e.g., pesticides and other chemicals)
- EMS
- Identification of insurance options for farm families
- Community economic development

- Attempt to tap funding designated for rural economic development by linking development to the availability of health services and the direct and indirect economic impacts of these services on rural communities.

Telemedicine

- The use of telemedicine and electronic technologies will become increasingly relevant to rural communities. Multiple hospitals and universities are involved with the development of programs. There is no focal point for statewide discussions related to rural health. The Office should develop a greater understanding of this topic, become more involved in discussion related to rural health, and consider providing facilitation in this area, as well as seeking to become the integrator of knowledge on this topic. This would be a good topic for a future statewide conference with possible/probable vendor support.

Conclusion

This Plan for the Office of Rural Health and Primary Care identifies numerous strategies that can complement other Office initiatives as demonstrated in current grant applications. Some the identified needs and grant funded strategies may need to be further refined or modified to more specifically reflect this Plan. More specific implementation steps need to be determined and timetables established.

Despite the many challenges, the Office does not have the luxury of managing issues sequentially, although, all issues cannot receive the same level of attention. Rather, there is a continuous need to manage multiple demands simultaneously and to assure an appropriately balanced application of human and financial resources to fulfill the Office's objectives.

This Plan should not be thought of as static, but rather a snapshot of current assumptions and proposed initiatives. The Plan provides an excellent road map for approaching currently identified issues, but it will need to be continuously reviewed and modified to reflect changing challenges. The Office and its constituents can be certain that there will be unanticipated, significant issues that will require not only financial resources but also the best thinking and leadership that can be brought to bear.

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Arkansas

Three rural definitions based on Census Places

Rural locations are those outside Census Places with a population...

...greater than or equal to 2,500

- Outside Census Places >= 2,500 people

...greater than or equal to 10,000

- Outside Census Places >= 2,500 people
- Census Places: 2,500 - 9,999

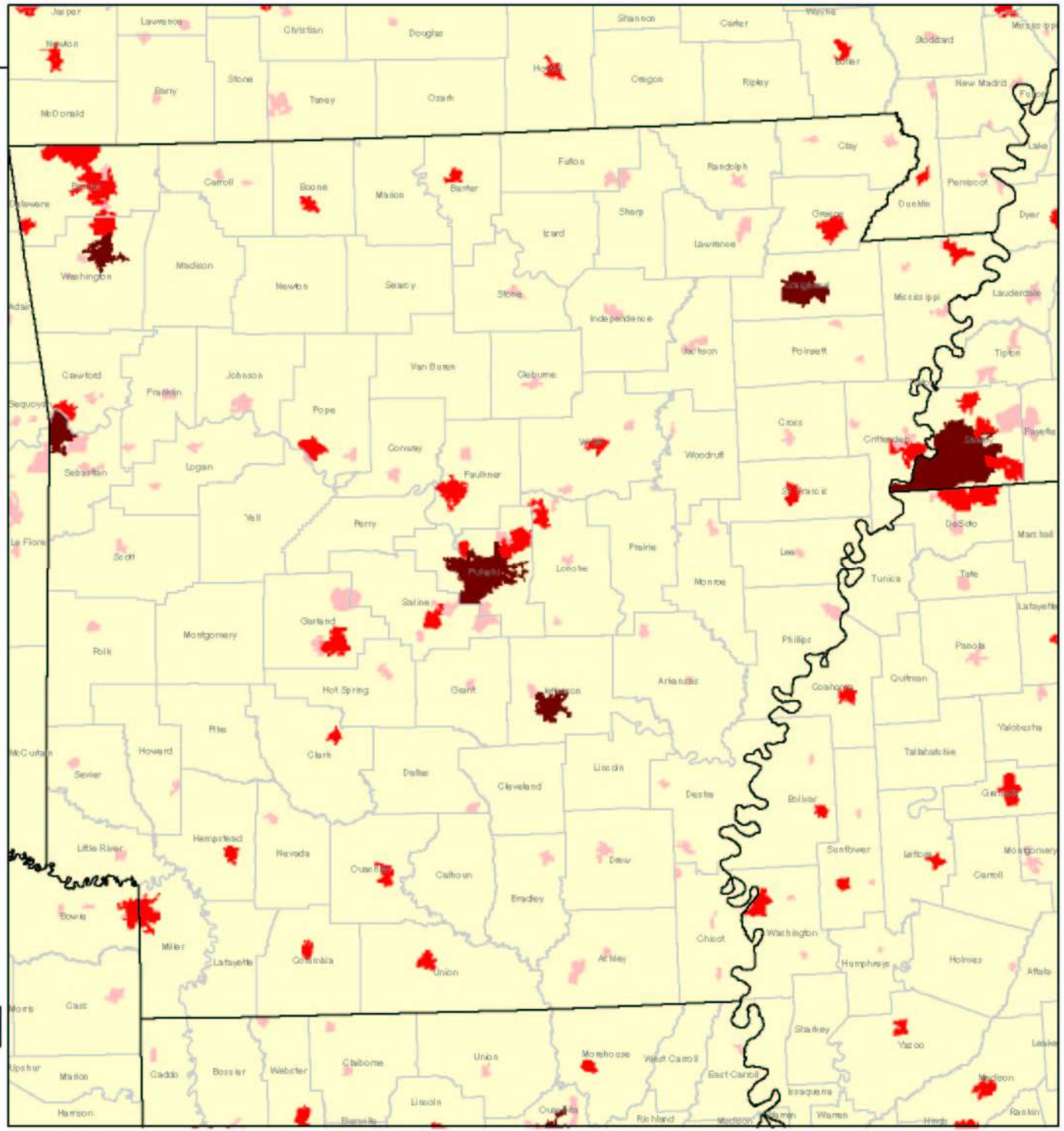
...greater than or equal to 50,000

- Outside Census Places >= 2,500 people
- Census Places: 2,500 - 9,999
- Census Places: 10,000 - 49,999

Urban locations under all three defintions:

- Census Places: >= 50,000 people

For more information on definitions, see documentation



Arkansas

Three rural definitions based on Census Urban Areas

Rural locations are those outside Census Urban Areas with a population...

...greater than or equal to 2,500

- Outside Census Urban Areas >= 2,500

...greater than or equal to 10,000

- Outside Census Urban Areas >= 2,500
- Census Urban Areas: 2,500 - 9,999

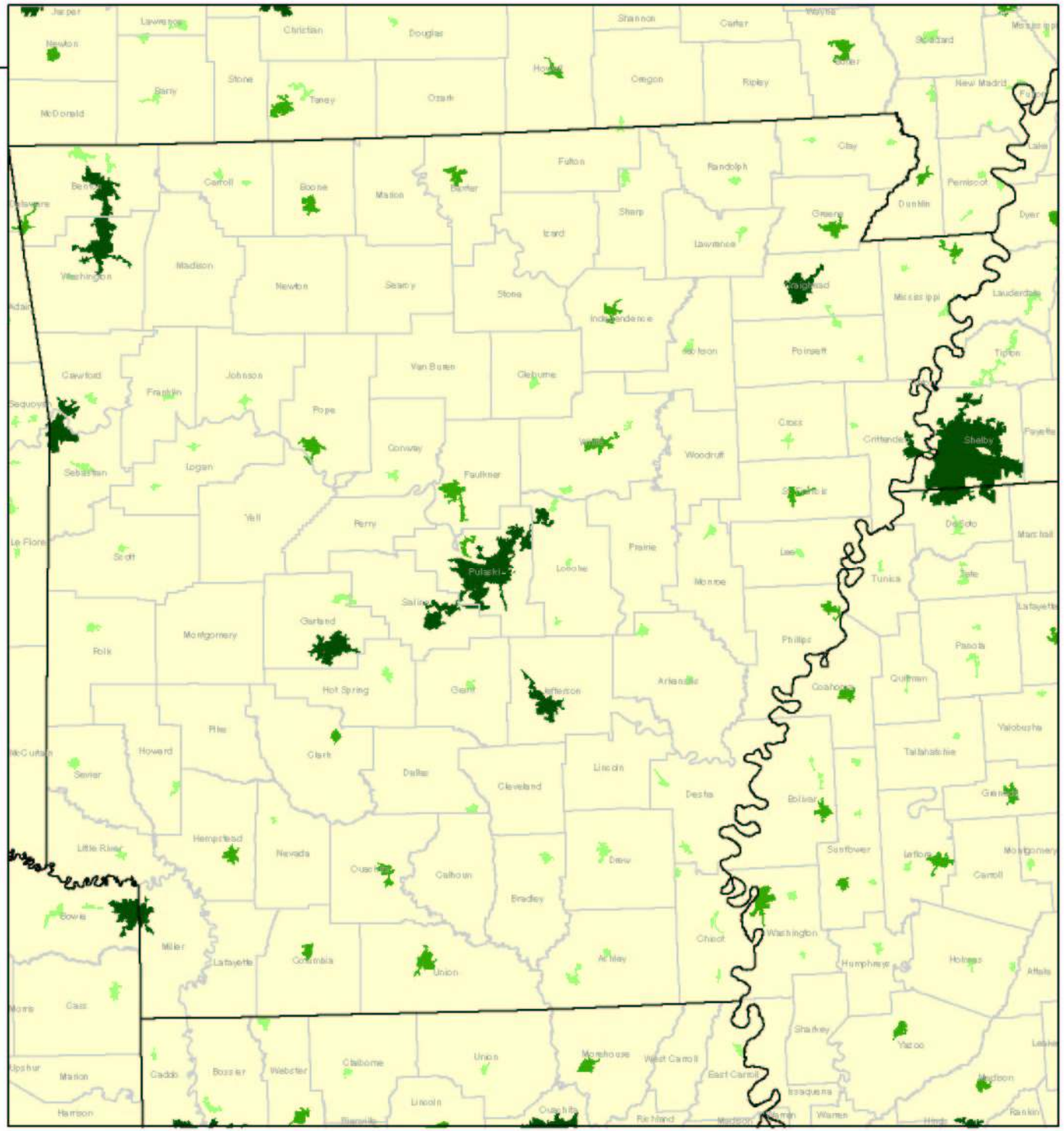
...greater than or equal to 50,000

- Outside Census Urban Areas >= 2,500
- Census Urban Areas: 2,500 - 9,999
- Census Urban Areas: 10,000 - 49,999

Urban locations under all three definitions:

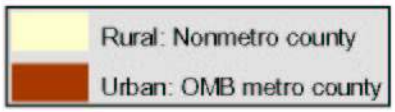
- Census Urban Areas: >= 50,000

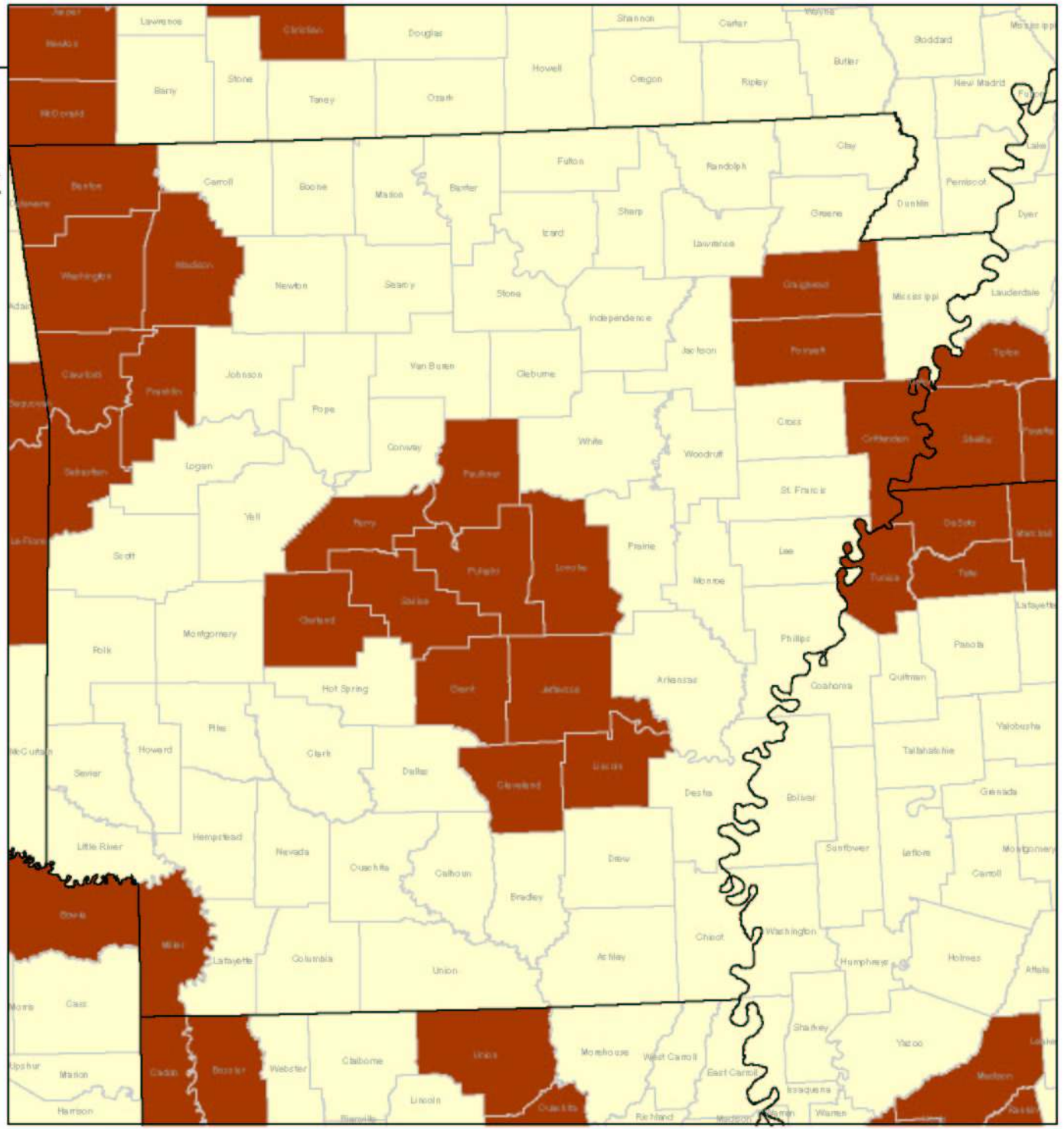
For more information on definitions, see documentation



Arkansas

Rural definition based on Office of Management and Budget (OMB) metro counties

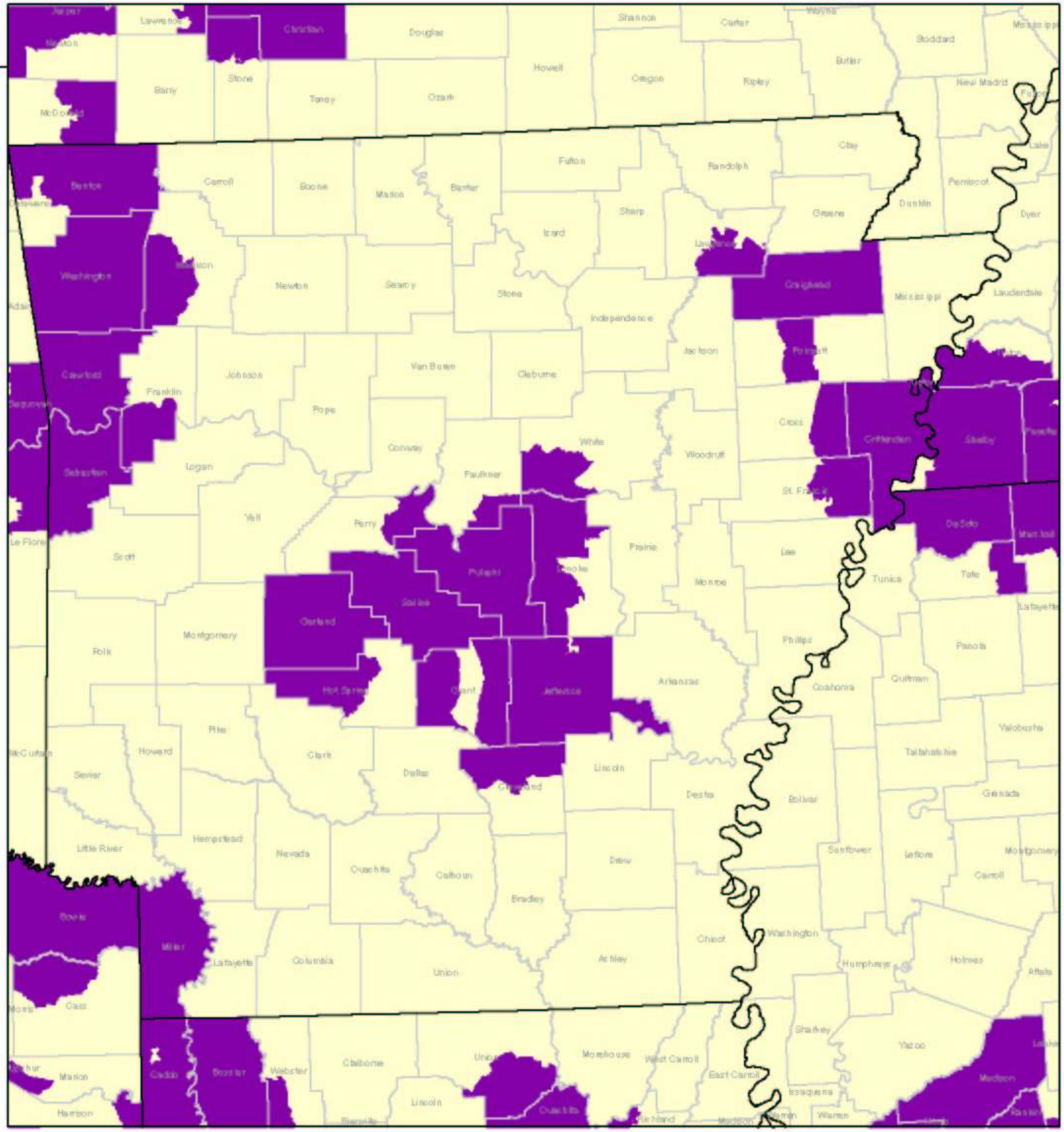




For more information on definitions, see documentation

Arkansas

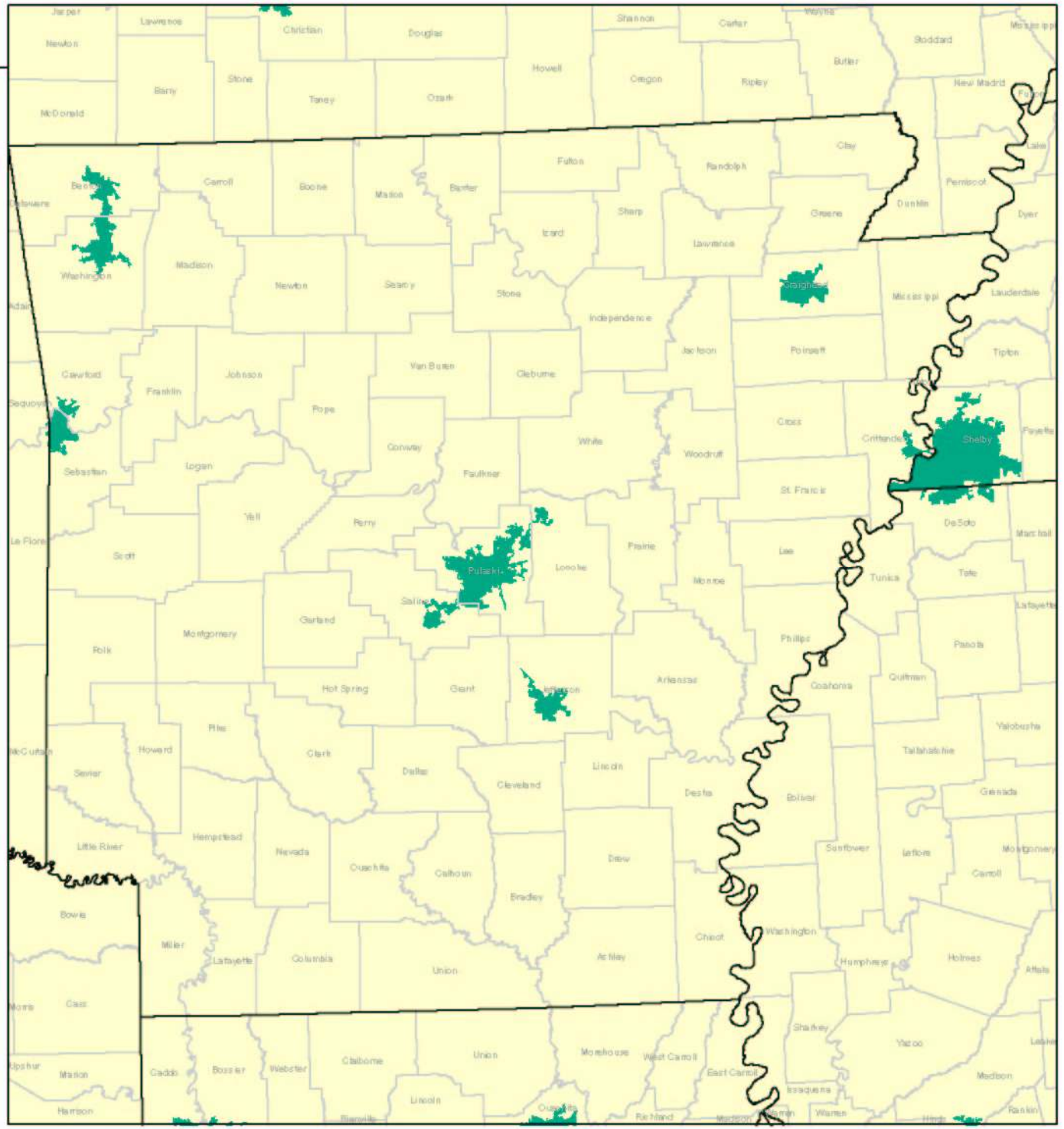
Rural definition based on Economic Research Service Rural-Urban Commuting Areas (RUCA)



For more information on definitions, see documentation

Arkansas

The USDA Business and Industry ineligible locations are Census Places greater than 50,000 people and their adjacent and contiguous Urbanized Areas



For more information on definitions, see documentation

Rural Population Indicators for United States, 2000

Rural is defined as areas outside…	Rural definition (see details in data appendix)									U.S. total
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
Population										
Total population considered rural (million)	87.7	115.8	177	59.1	70.6	89.5	48.8	57.6	101.9	281.4
Percent of population considered rural	31.1	41.1	62.9	21	25.1	31.8	17.4	20.5	36.2	N/A
Percent of land area considered rural	97	97.9	99	97.4	97.6	98	74.6	81.2	97.9	N/A
Population density (people/sq mile)	25.6	33.4	50.5	17.1	20.4	25.8	18.5	20	29.4	79.6
Age										
Percent younger than 18	26	25.9	25.7	26.1	26	25.7	25.2	25.3	25.6	25.6
Percent 19 to 64	61.5	61	61.1	61.1	60.8	60.7	59.9	59.9	60.7	61.9
Percent 65 or older	12.5	13.1	13.1	12.8	13.2	13.6	15	14.8	13.7	12.4
Ethnicity										
Percent non-Hispanic Black	6.9	7.2	8.3	5.9	6.6	7.2	8.4	8.4	7.5	12
Percent American Indian	1.2	1.1	0.9	1.6	1.6	1.4	1.8	1.8	1.3	0.7
Percent Hispanic	5	5.8	7.8	4	4.8	6.1	5.3	6.6	6.4	12.5
Education										
Percent not completing high school	19.2	19.1	18.4	21.2	21.6	21.8	23.5	23.7	21.4	19.6
Percent completing high school only	33.7	33.1	31.2	36.2	35.8	35	35.9	35.5	34.5	28.6
Percent with only some college	20.4	20.5	21	20.1	20.1	20.3	19.7	19.8	20.5	21
Percent with a college degree or higher	26.8	27.3	29.4	22.5	22.4	22.9	20.8	21	23.6	30.7

Rural Population Indicators for United States, 2000

Rural is defined as areas outside…	Rural definition (see details in data appendix)									U.S. total
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
Income										
Average household income ($1,000)	56	56	57	51	50	49	43	43	49	57
Percent in near-poverty households	8	8.2	8	9	9.3	9.6	10.9	10.9	9.5	8.6
Percent in below-poverty households	9.9	10.3	10.5	11	11.7	12.5	14.8	14.8	12.5	12.4
Percent in deep-poverty households	4.1	4.3	4.5	4.5	4.8	5.2	6.1	6.1	5.2	5.6
Employment										
Percent in agriculture, forestry, fishing, hunting, mining industries	4	3.5	2.6	5.6	5.2	4.7	5.7	5.6	4.3	1.9
Percent traveling > 1/2 hour to work	10.3	9.9	9.8	10.3	9.8	8.9	6.6	6.6	8.5	10.4
Housing										
Percent seasonal housing	7	6.2	4.7	8.9	8.1	7	8.5	8.2	6.8	3.3
Percent without complete plumbing	2	1.7	1.3	2.7	2.4	2.1	2.5	2.4	1.9	1.2
Houshold composition										
Percent 65 and older and living alone	25	26.4	27.2	25.2	26.5	27.6	29.3	29.3	27.8	28.2
Percent own children under 18 in female-headed houshold	13.5	14.9	16.5	12.8	14.4	16.2	18.6	18.8	16.9	20

Rural Population Indicators for Arkansas, 2000

Rural is defined as areas outside…	Rural definition (see details in data appendix)									State total
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
Population										
Total population considered rural (million)	1.2	1.6	2.2	1.3	1.5	1.8	1.2	1.3	1.9	2.7
Percent of population considered rural	46.1	60.2	81.6	47.5	57.0	67.8	43.3	49.2	70.1	N/A
Percent of land area considered rural	97.1	98.2	99.3	98.3	98.6	99.0	73.3	79.1	98.9	N/A
Population density (people/sq mile)	24.4	31.5	42.2	24.8	29.7	35.2	30.3	31.9	36.4	51.3
Age										
Percent younger than 18	25.4	25.6	25.7	25.2	25.4	25.3	25.1	25.1	25.2	25.4
Percent 19 to 64	60.7	59.9	59.9	60.6	59.7	59.8	58.8	59.3	59.7	60.5
Percent 65 or older	13.9	14.5	14.4	14.1	14.9	15.0	16.1	15.5	15.1	14.0
Ethnicity										
Percent non-Hispanic Black	8.1	10.8	12.4	7.9	10.3	12.3	15.7	14.8	12.6	15.6
Percent American Indian	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.6	0.6
Percent Hispanic	1.9	2.3	3.1	1.9	2.2	2.4	2.6	2.6	2.4	3.2
Education										
Percent not completing high school	27.4	27.5	26.1	27.0	27.4	27.0	29.3	28.7	26.9	24.7
Percent completing high school only	38.6	37.6	35.9	38.3	37.7	36.6	36.6	36.4	36.5	34.1
Percent with only some college	19.1	19.2	20.0	19.2	19.1	19.3	18.4	18.6	19.4	20.5
Percent with a college degree or higher	14.9	15.7	18.0	15.5	15.8	17.1	15.7	16.4	17.2	20.7

Rural Population Indicators for Arkansas, 2000

Rural is defined as areas outside...	Rural definition (see details in data appendix)									State total
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
Income										
Average household income ($1,000)	41.0	40.0	42.0	42.0	41.0	41.0	38.0	39.0	41.0	43.0
Percent in near-poverty households	12.1	12.1	11.7	11.8	12.0	12.0	13.1	12.8	12.1	11.4
Percent in below-poverty households	14.4	15.4	15.6	14.2	15.2	15.9	18.2	17.7	16.1	15.8
Percent in deep-poverty households	5.4	5.9	6.2	5.4	5.9	6.3	7.3	7.1	6.4	6.6
Employment										
Percent in agriculture, forestry, fishing, hunting, mining industries	6.4	5.6	4.5	6.3	5.9	5.2	6.1	5.9	5.1	3.7
Percent traveling > 1/2 hour to work	12.5	11.5	10.4	12.5	11.6	10.5	8.0	8.0	10.3	9.6
Housing										
Percent seasonal housing	5.4	4.4	3.5	5.1	4.5	3.9	4.5	4.3	4.0	3.0
Percent without complete plumbing	2.7	2.3	1.9	2.6	2.3	2.1	2.3	2.3	2.1	1.7
Houshold composition										
Percent 65 and older and living alone	26.9	27.9	28.5	26.4	27.3	28.2	29.7	29.7	28.5	29.1
Percent own children under 18 in female-headed houshold	14.7	17.9	19.8	14.5	17.1	19.1	21.8	21.2	19.6	21.9

Rural Definitions: Data Documentation and Methods

Identifying Nine Rural Definitions

The rural definitions presented here are based on four sources described in detail below: Census Bureau's list of places, Census Bureau's list of urban areas, Office of Management and Budget's metropolitan areas, and ERS rural-urban commuting areas.

Three Definitions Based on Census Places

To generate statistical tabulations, the Census Bureau maintains a list of places that, in 2000, included 19,452 incorporated and 5,698 unincorporated places. Incorporated places have legally defined boundaries established by each State. Unincorporated places, known as census-designated places (CDPs), are delineated by committees of local experts to recognize population concentrations that are identifiable by name but not legally incorporated. Because they are based on administrative or locally determined boundaries and not statistical criteria, places can be of any population size or density. See a list of all places in the U.S. and their 2000 population, or visit the Census website for more details.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #1	All areas outside Census places with 2,500 or more people	87.7 million people 31% of U.S. population 97% of U.S. land area
Rural definition #2	All areas outside Census places with 10,000 or more people	115.8 million people 41% of U.S. population 98% of U.S. land area
Rural definition #3	All areas outside Census places with 50,000 or more people	177 million people 63% of U.S. population 99% of U.S. land area

Three Definitions Based on Census Urban Areas

The U.S. Census Bureau defines an urban area as: "Core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile."

There are two categories of urban areas. An urbanized area (UA) denotes an urban area of 50,000 or more people. An urban cluster (UC) is an urban area with fewer than 50,000 people, but more than 2,500. UAs were first delineated in the United States in the 1950 census, while UCs were added in the 2000 census. See a list of urban areas in the U.S. and their 2000 population, or visit the Census website for more details.

The Census Bureau classifies as rural all territory outside of urban areas. Definition #4 corresponds with this classification, widely recognized as the "official" Federal definition of rural for statistical purposes. Definitions #5 and #6 broaden the rural definition to include urban areas with populations less than 10,000 and 50,000, respectively.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #4	All areas outside urban areas. This places the upper limit of rural at 2,500, since urban areas must have at least 2,500 people.	59.1 million people 21% of U.S. population 97% of U.S. land area
Rural definition #5	All areas outside urban areas with 10,000 or more people.	70.6 million people 25% of U.S. population 98% of U.S. land area
Rural definition #6	All areas outside urban areas with 50,000 or more people.	89.5 million people 32% of U.S. population 98% of U.S. land area

One Definition Based on Office of Management and Budget (OMB) Metropolitan Statistical Area Designation

Metropolitan statistical areas (metro areas) are geographic entities defined by the U.S. Office of Management and Budget (OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. A metro area includes one or more counties containing a core urban area of 50,000 or more people, together with any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core. OMB also defines micropolitan statistical areas using the same method but centered around urban areas with at least 10,000 but no more than 50,000 people. Definition #7 classifies micropolitan counties as rural. See a list of metro and micro counties or visit the Census website for additional information.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #7	All counties outside metropolitan areas in 2003 (based on 2000 census data)	48.8 million people 17% of U.S. population 75% of U.S. land area

One Definition Based on ERS Rural-Urban Commuting Area Codes (RUCAs)

The RUCA system classifies census tracts following the same theoretical concepts and data used by OMB to define metro and micro areas. Measures of population density, urbanization, and daily commuting are used to identify metropolitan, micropolitan, and small-town urban cores, adjacent tracts that are economically integrated with those cores, and outlying rural tracts. The use of census tracts instead of counties provides a different and more detailed geographic pattern of settlement classification.

The classification contains 10 primary and 30 secondary codes. Few, if any, research or policy applications need the full set of codes. Rather, the system allows for stricter or looser delimitation of metropolitan, micropolitan, and small-town commuting areas, and different definitions of rural based on selected combinations of codes. The rural definition used here consists of RUCA primary codes 4-10. In addition to the RUCA system based on census tracts, a zip code version is also available. See the Measuring Rurality Briefing Room for more information and data.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #8	Census tracts with 2000 RUCA codes 4 through 10	57.6 million people 20% of U.S. population 81% of U.S. land area

One Definition Based on USDA's Business and Industry (B&I) Loan Program Definition

As part of its eligibility criteria, the B&I Loan Program adopted a definition established in the 2002 Farm Bill that includes as rural all areas outside "places of 50,000 or more people and their adjacent and contiguous urbanized areas." This language combines criteria from two of the sources described here: Census Places and Census Urban Areas.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #9	Locations outside places of 50,000 or more people and their associated urbanized areas.	101.9 million people 36% of U.S. population 98% of U.S. land area

Note that all of the above definitions are based on the 2000 Census. Over time, changes, additions, and corrections are made. For the most up-to-date Census and OMB definitions, see the links to their sites.

Developing Socioeconomic Indicators

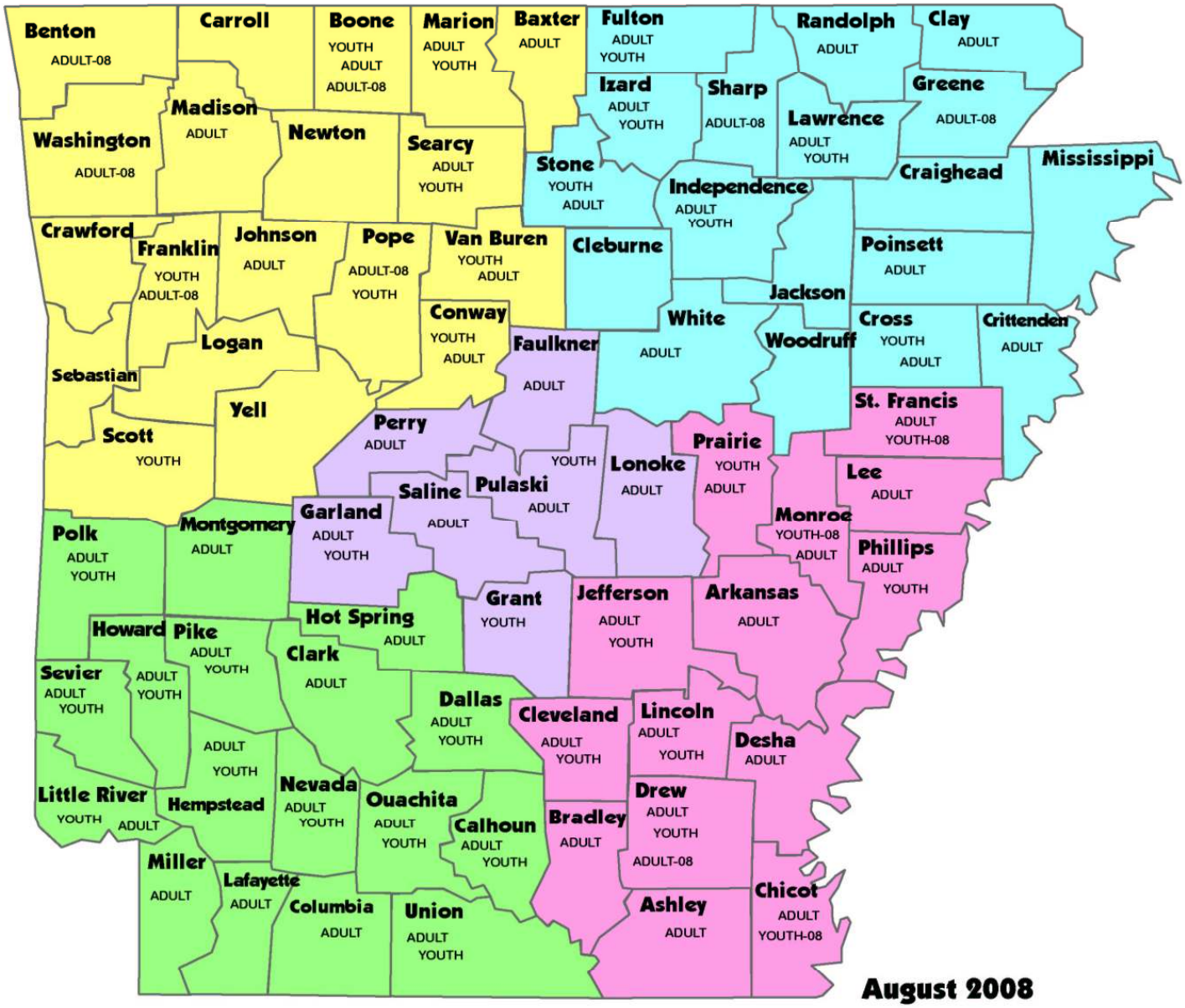
The following table summarizes the methods used to compute socioeconomic indicators presented in the data product. It is meant as a guide to those wishing to duplicate the indicators, and for those interested in more detail about the indicators. The first column lists the indicator. The second column lists the Census 2000 Summary File 3 (SF3) segment (for users of the machine-readable file). The third column gives the formula for computing the indicator, using the SF3 variable naming convention. SF3 data files and technical documentation may be downloaded from the Census Bureau's website.

Sociodemographic Indicator	Segment	Variable/Formula
Population		
Total population	Segment 1	p001001
Percent of population considered rural	Segment 1	Varies for each rural definition, but is always defined by (aggregate of p001001 for the defined rural area) / (aggregate of p001001 for the reference area) In our case the reference area is either the U.S. or a particular State.
Percent of land considered rural	Geo	Varies for each rural definition, but is always defined by (aggregate of AREALAND for the defined area) / (aggregate of AREALAND for the reference area) In our case the reference area is either the U.S. or a particular State.
Population density (people / sq mile)	Geo	p001001 / (AREALAND * .38610) AREALAND is transformed from square meters
Age		
Percent younger than 18	Segment 1	sum(p008003 through p008020, p008042 through p008049, p008050 through p008059) / p001001
Percent 19 to 64	Segment 1	sum(p008021 through p008034, p008060 through p008073) / p001001
Percent 65 or older	Segment 1	sum(p008035 through p008040, p008074 through p008079) / p001001
Ethnicity		
Percent non-Hispanic Black	Segment 3	p007004 / p001001
Percent Hispanic	Segment 3	p007010 / p001001
Percent American Indian	Segment 3	p007005 / p001001

Education (for the population 25 years and over)		
Percent not completing high school	Segment 3	sum (p037003 through p0370019, p037020 through p037027) / p037001
Percent completing high school only	Segment 3	(p037011 + p037028) / p037001
Percent completing some college	Segment 3	sum(p037012,p037013, p037029,p037030) / p037001
Percent completing college or more	Segment 3	sum(p037014 through p037018, p037031 through p037035) / p037001
Income		
Average household income ($1000)	Segment 6	p054001 / p052001
Poverty (for the population for whom poverty is determined, i.e. not living in group quarters)		
Percent near poverty (ratio of income to poverty level is 1.00 to 1.49)	Segment 7	(p088005 + p088006) / p088001
Percent below poverty (ratio of income to poverty level is less than 1.00)	Segment 7	(p088002 + p088003 + p088004) / p088001
Percent in deep poverty (ratio of income to poverty is less than .50)	Segment 7	p088002 / p088001
Employment		
Percent in agriculture, forestry, fishing and hunting, and mining industries (for the employed civilian population 16 years and over)	Segment 5	(p049003 + p049030) / p049001
Percent traveling 30 minutes or longer to work (for workers 16 years and over)	Segment 3	sum(p031009 through p031014) / p031002
Housing		
Percent seasonal housing (for housing units)	Segment 56	h008005 / h001001
Percent without complete plumbing facilities (for housing units)	Segment 59	h047003 / h047001
Household composition		
Percent 65 years and older living alone	Segment 1	(p011013 + p011016) / p011001
Percent own children under 18 in female-headed household	Segment 2	p016019 / p016001

APPENDIX 4. Hometown Health Improvement Map

Arkansas Department of Health
Hometown Health Improvement Initiative

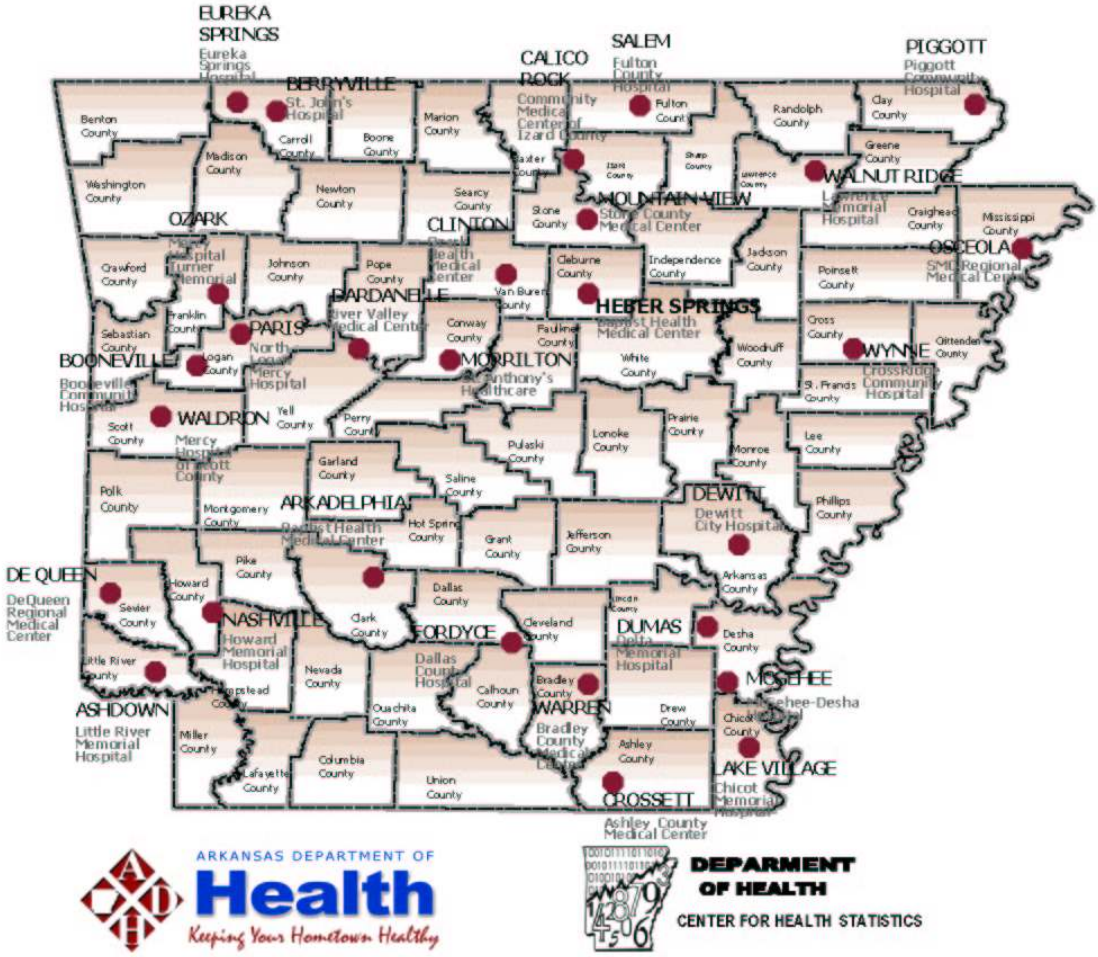


All counties have HHI Coalitions/Initiatives/planning groups
Surveys completed in **black**
ADULT - County Adult Health Survey (formerly known as BRFSS)
YOUTH - County Youth Health Survey (formerly known as YRBS)

ARKANSAS DEPARTMENT OF Health
Keeping Your Hometown Healthy

APPENDIX 5. Critical Access Hospitals Map

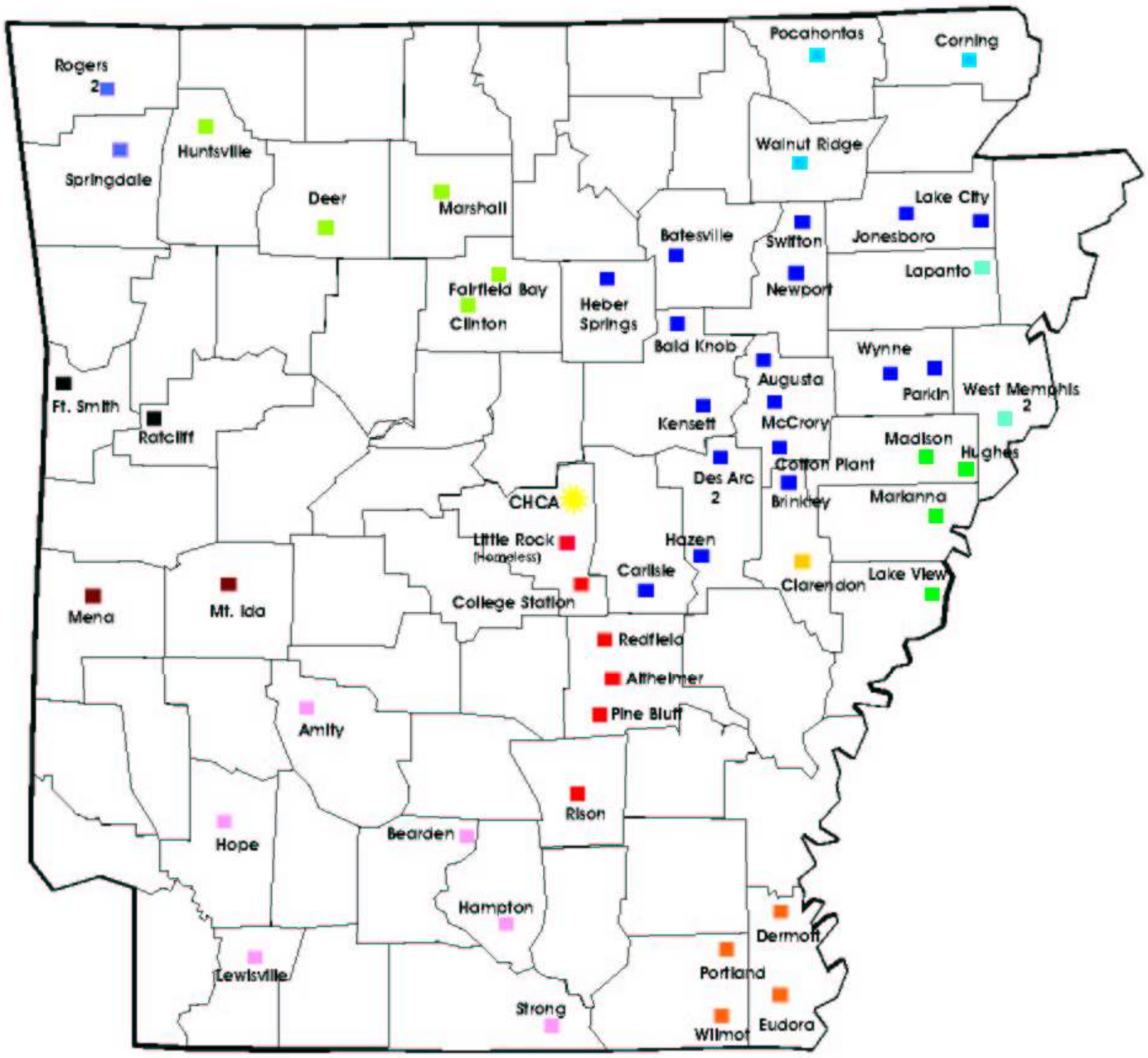
ARKANSAS CRITICAL ACCESS HOSPITALS - 2007



PROVIDER	CITY	START DATE	PROVIDER	CITY	START DATE
Baptist Health - Arkadelphia	Arkadelphia	07/01/2004	Chicot Memorial Hospital	Lake Village	12/01/2005
Little River Memorial Hospital	Ashdown	03/01/2004	McGehee-Desha Hospital	McGehee	07/01/2000
St. John's Hospital	Berryville	12/07/2005	St. Anthony's Healthcare	Morrilton	10/01/2004
Booneville Community Hospital	Booneville	07/01/2002	Stone County Medical Center	Mt. View	10/01/2000
CMC of Izard County	Calico Rock	02/01/2000	Howard Memorial Hospital	Nashville	02/01/2001
Ozark Health Medical Center	Clinton	04/01/2001	SMC Regional Medical Center	Osceola	10/01/2002
Ashley County Hospital	Crossett	10/01/2004	Mercy Hospital Turner Memorial	Ozark	01/01/2000
River Valley Medical Center	Dardanelle	10/01/1999	North Logan Mercy Hospital	Paris	07/01/1999
DeQueen Regional Med Center	DeQueen	10/01/2003	Piggott Community Hospital	Piggott	12/28/2005
Dewitt City Hospital	Dewitt	11/01/2001	Fulton County Hospital	Salem	08/01/2004
Delta Memorial Hospital	Dumas	10/10/2005	Mercy Hospital of Scott County	Waldron	12/31/1999
Eureka Springs Hospital	Eureka Springs	01/01/2000	Lawrence Memorial Hospital	Walnut Ridge	07/31/2000
Dallas County Medical Center	Fordyce	10/01/1999	Bradley County Medical Center	Warren	11/01/2005
Baptist Health - Heber Springs	Heber Springs	04/01/2001	CrossRidge Community Hospital	Wynne	07/01/2000

APPENDIX 6. Community Health Centers Map

Community Health Center Locations In Arkansas

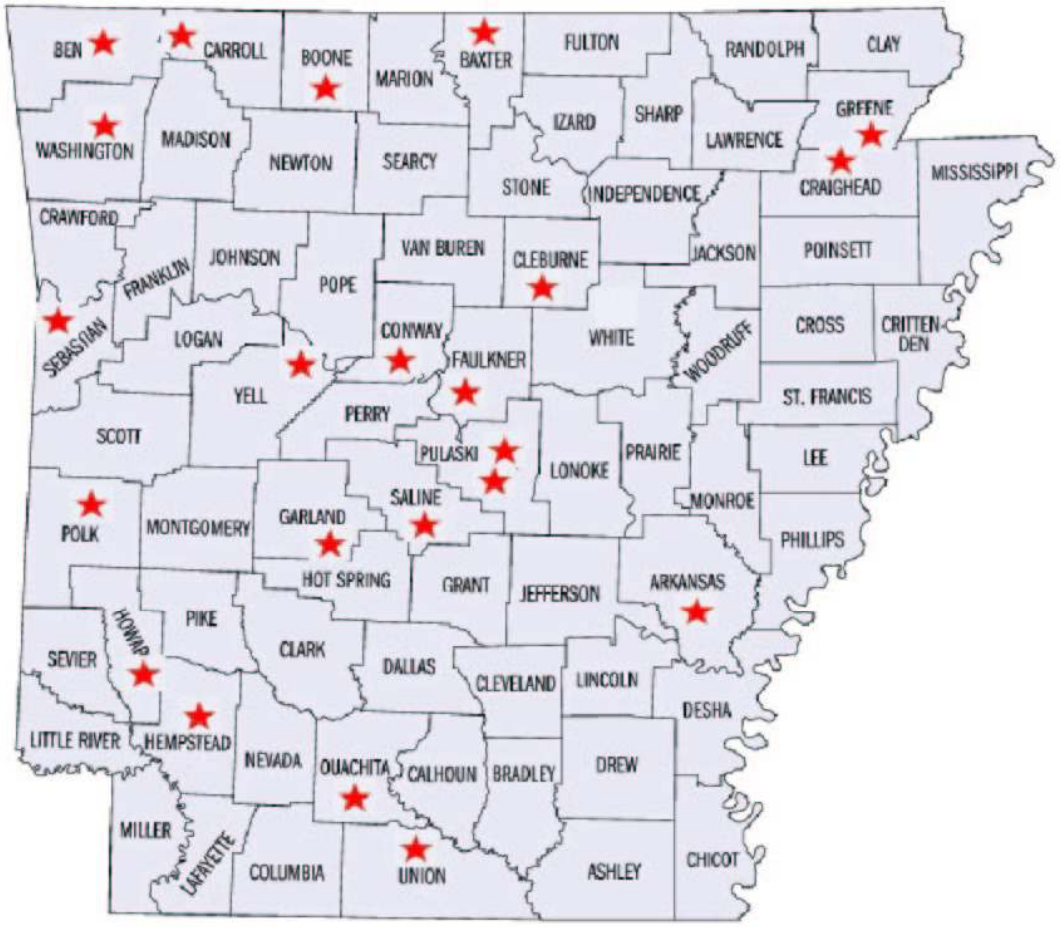


- Boston Mountain Rural Health Center, Inc.
- CABUN Rural Health Services, Inc.
- Community Clinic at St. Francis House, Inc.
- Corning Area Healthcare, Inc.
- East Arkansas Family Health Center, Inc.
- Healthy Connections, Inc.
- Jefferson Comprehensive Care System, Inc.
- Lee County Cooperative Clinic, Inc.
- Mainline Health Systems, Inc.
- Mid-Delta Health Systems, Inc.
- River Valley Primary Care Services, Inc.
- White River Rural Health Center, Inc.

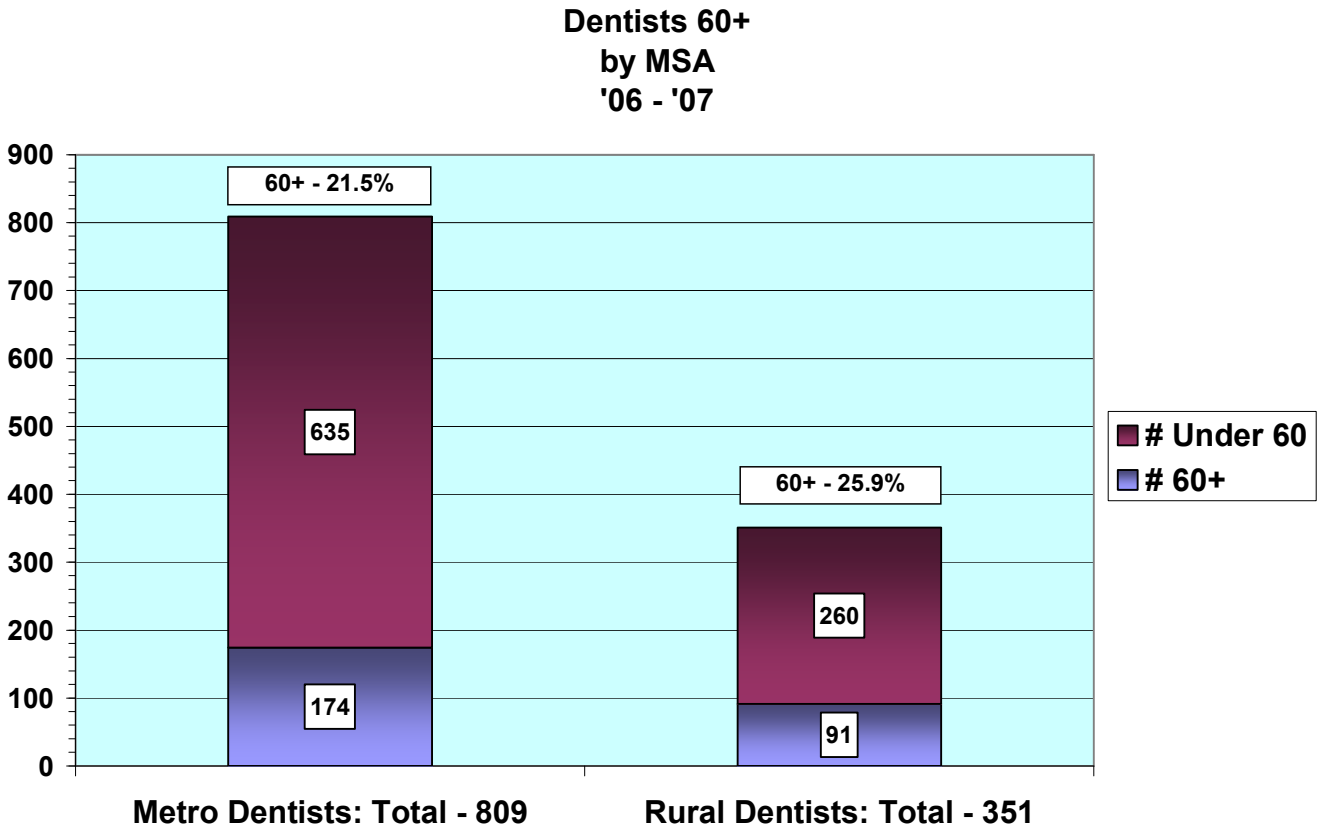
8-08

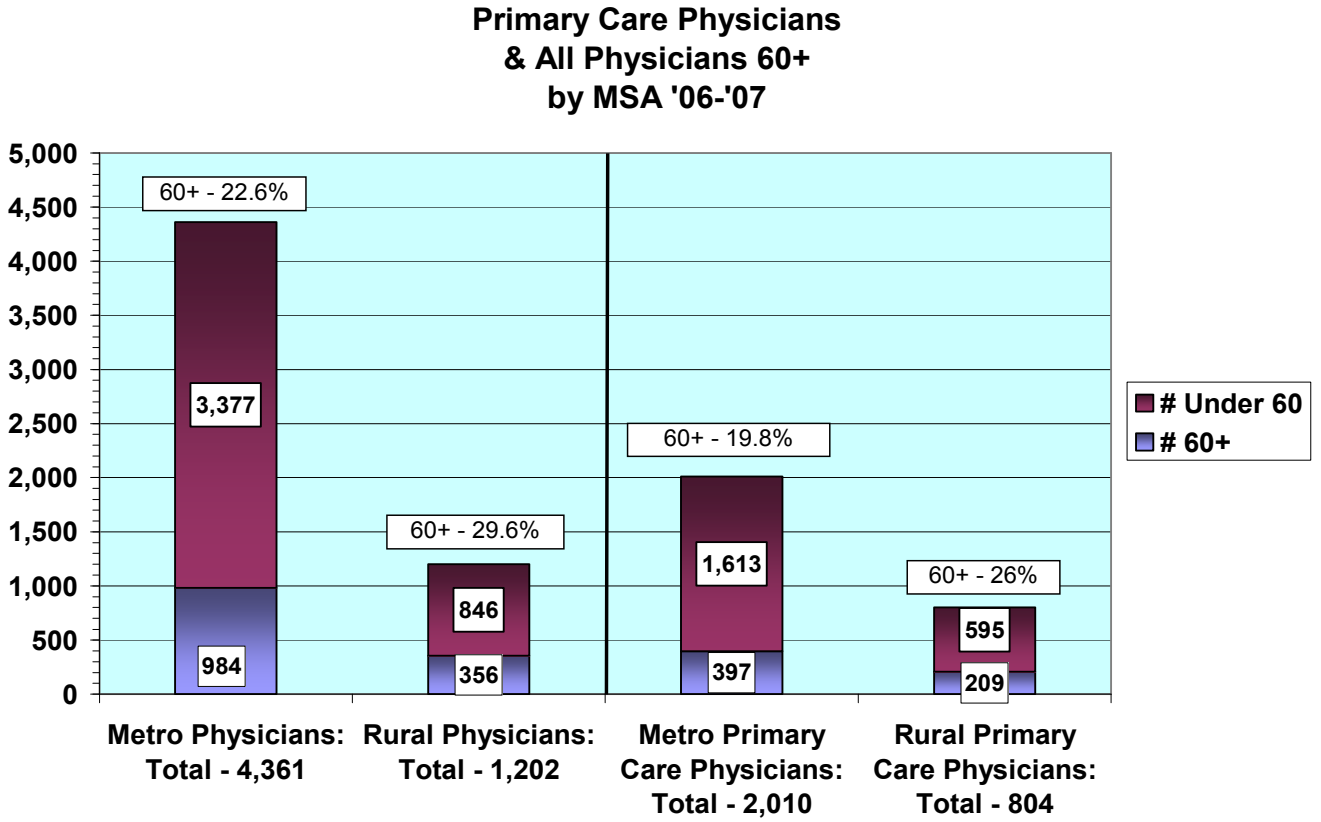
APPENDIX 7. Arkansas Association of Charitable Clinics Map

Locations of Arkansas Charitable Clinics

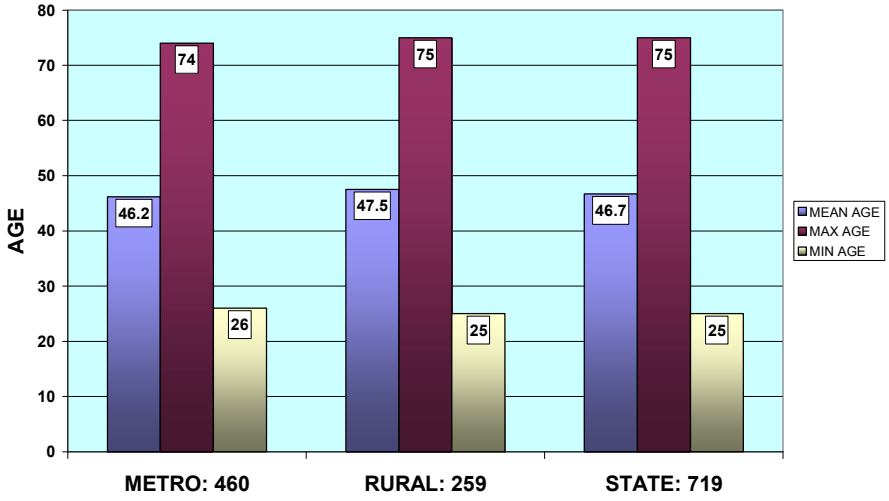


SOURCE: THE ARKANSAS ASSOCIATION OF CHARITABLE CLINICS

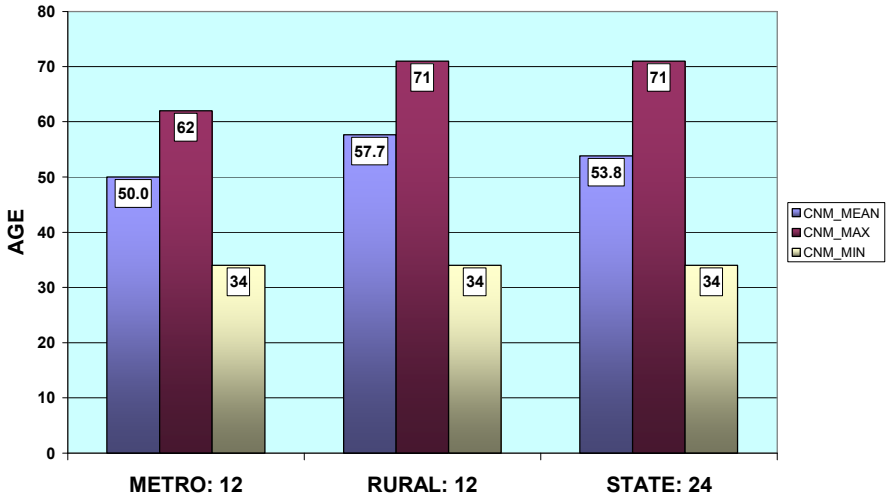

Dentists 60+
by MSA
'06 - '07
900
800
700
600
500
400
300
200
100
0
60+ - 21.5%
635
174
60+ - 25.9%
260
91
Under 60
60+
Metro Dentists: Total - 809
Rural Dentists: Total - 351


Primary Care Physicians
& All Physicians 60+
by MSA '06-'07
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
60+ - 22.6%
3,377
984
60+ - 29.6%
846
356
60+ - 19.8%
1,613
397
60+ - 26%
595
209
Under 60
60+
Metro Physicians: Total - 4,361
Rural Physicians: Total - 1,202
Metro Primary Care Physicians: Total - 2,010
Rural Primary Care Physicians: Total - 804

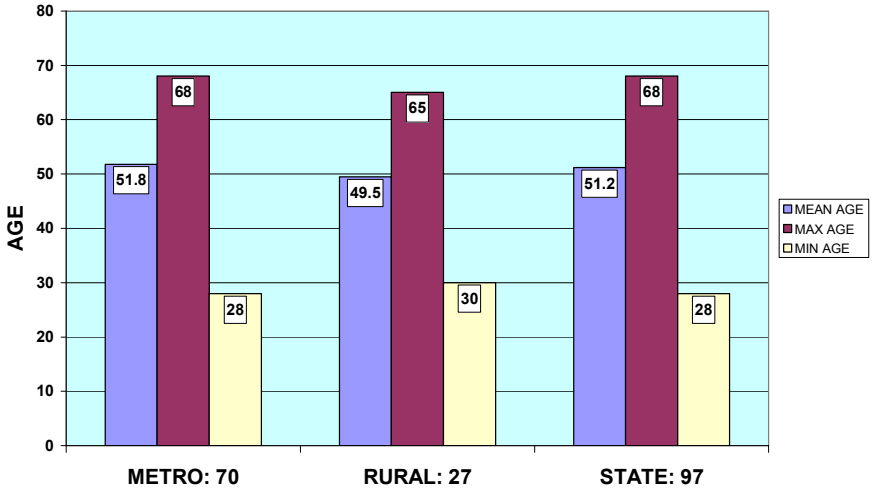
Advanced Nurse Practitioners
Average Ages '06-'07



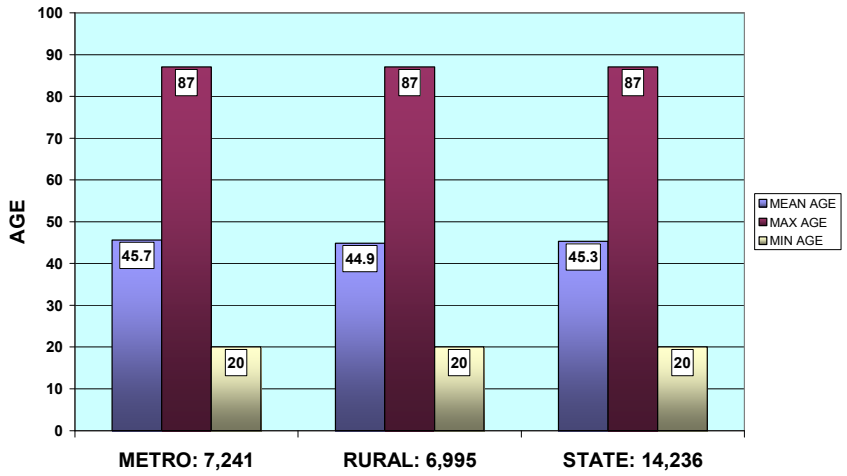
Certified Nurse Midwife
Average Ages '06-'07



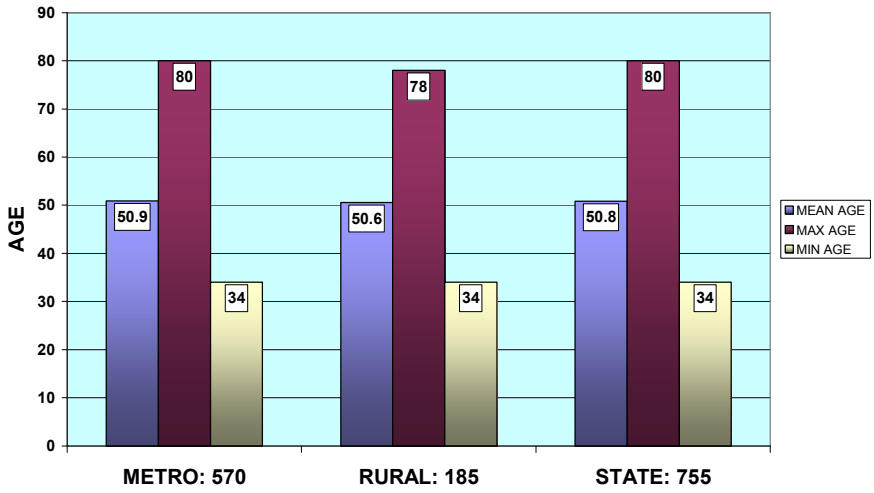
Clinical Nurse Specialist '06-'07
Average Ages



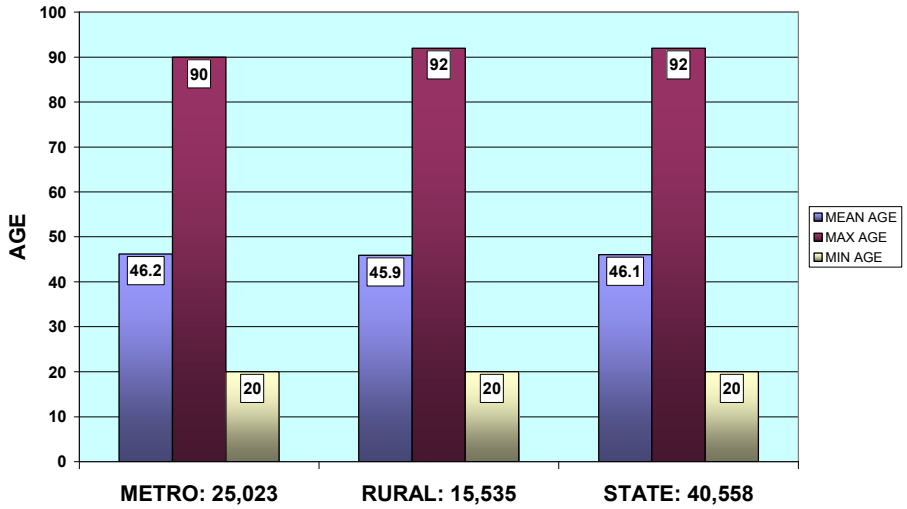
Licensed Practical Nurses
Average Ages '06-'07



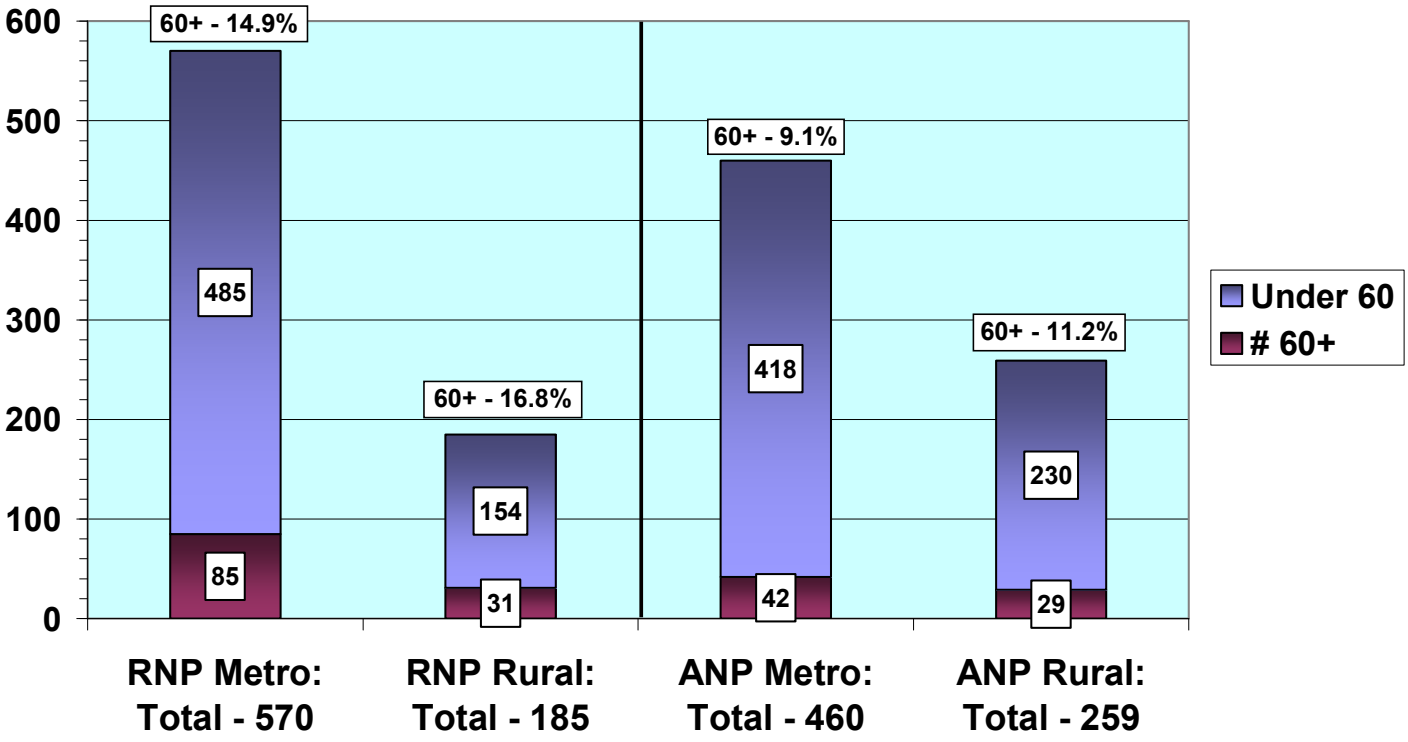
Registered Nurse Practitioners
Average Age '06-'07



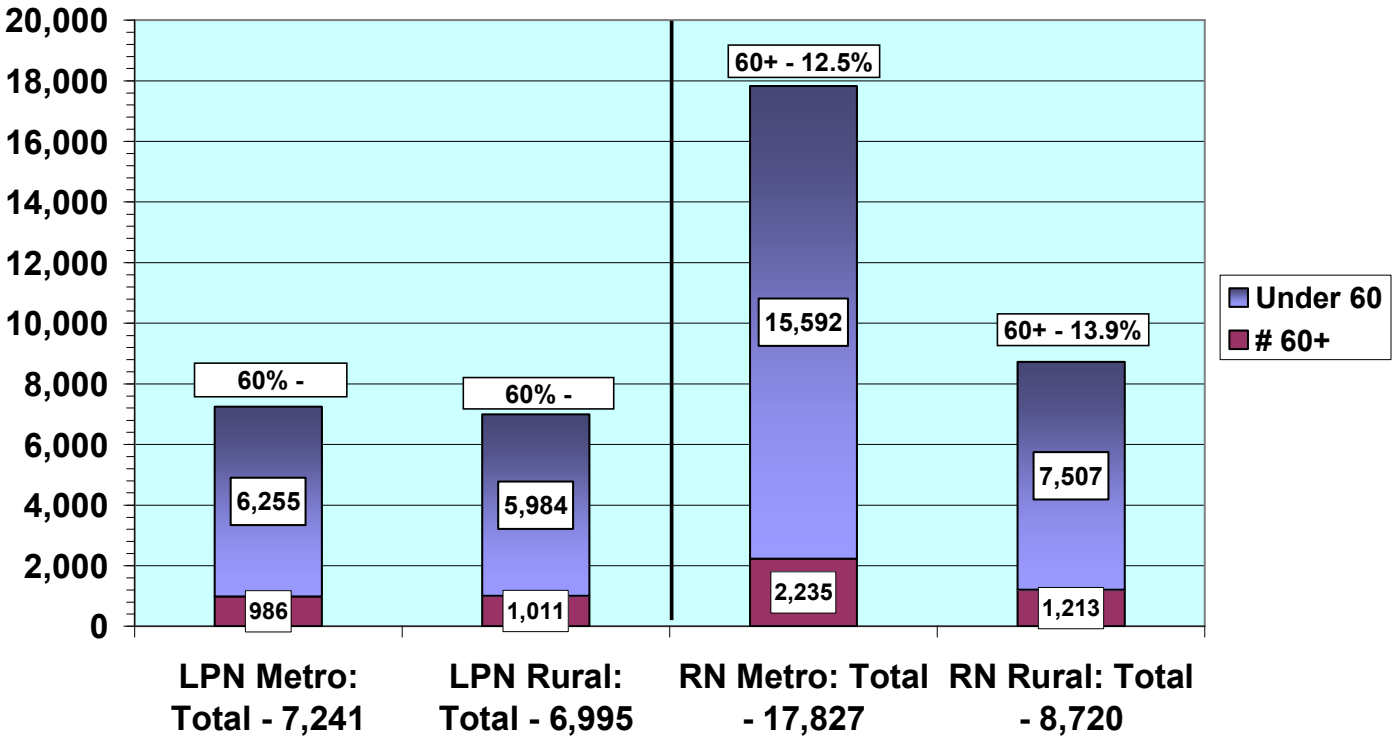
Nurses
Average Ages '06-'07



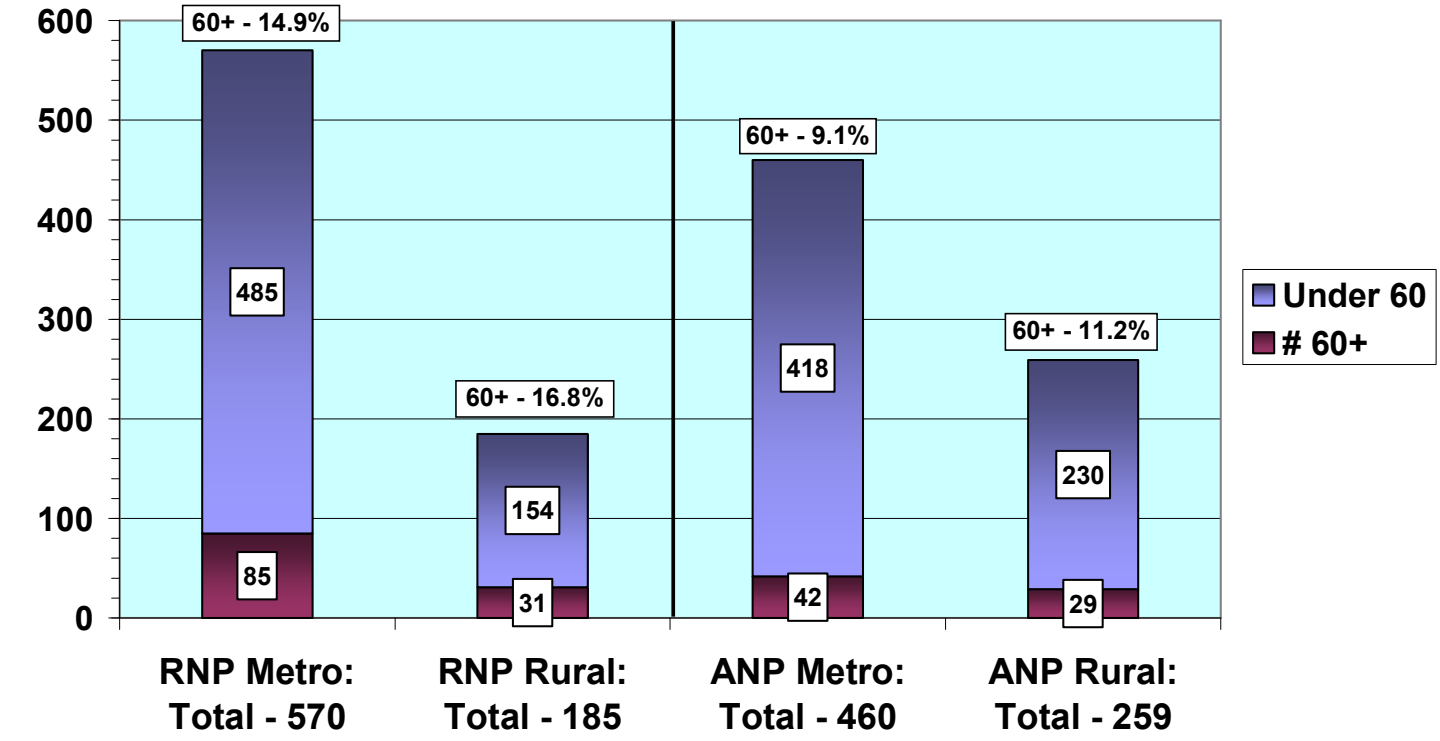
Registered Nurse Practitioners (RNP)
& Advanced Nurse Practitioners (ANP)
60+ by MSA '06-'07



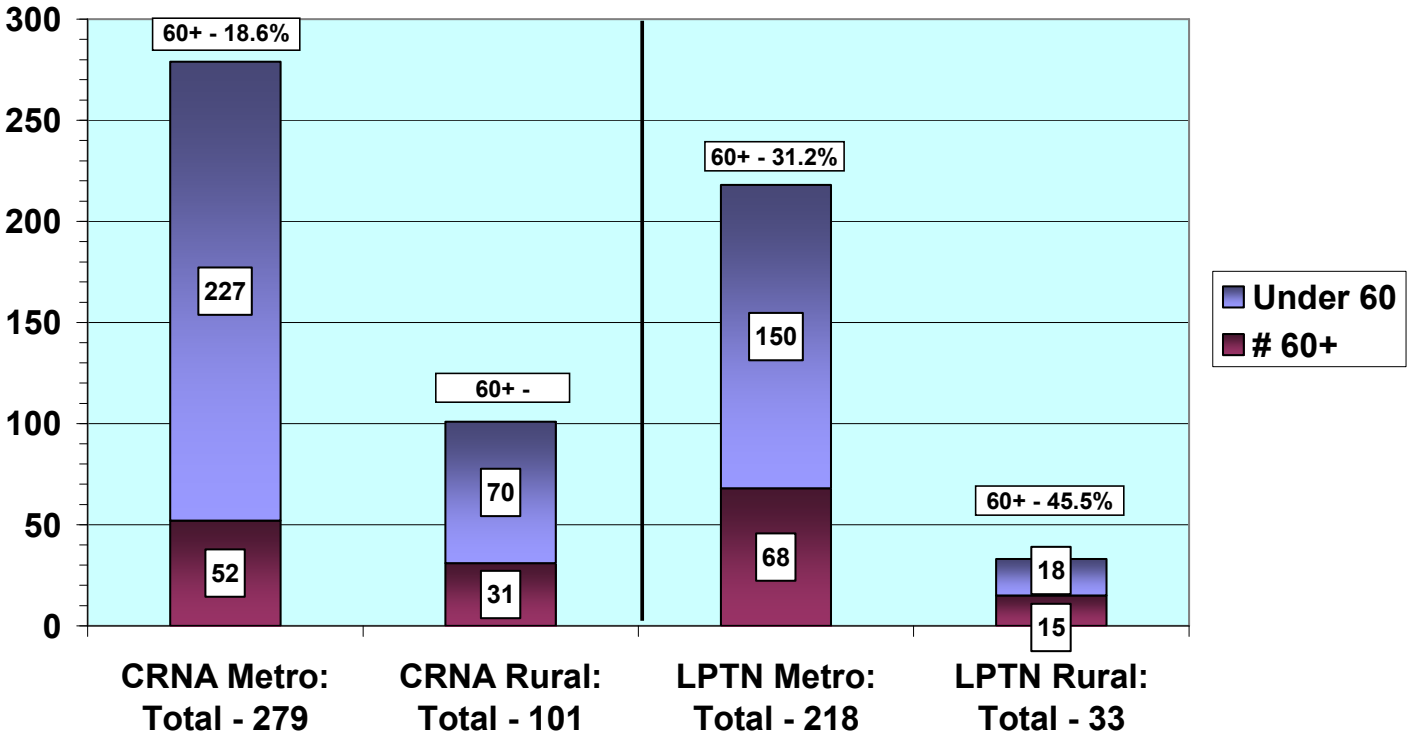
Licensed Practical Nurses(LPN) & Registered Nurses (RN) 60+ by MSA '06-'07



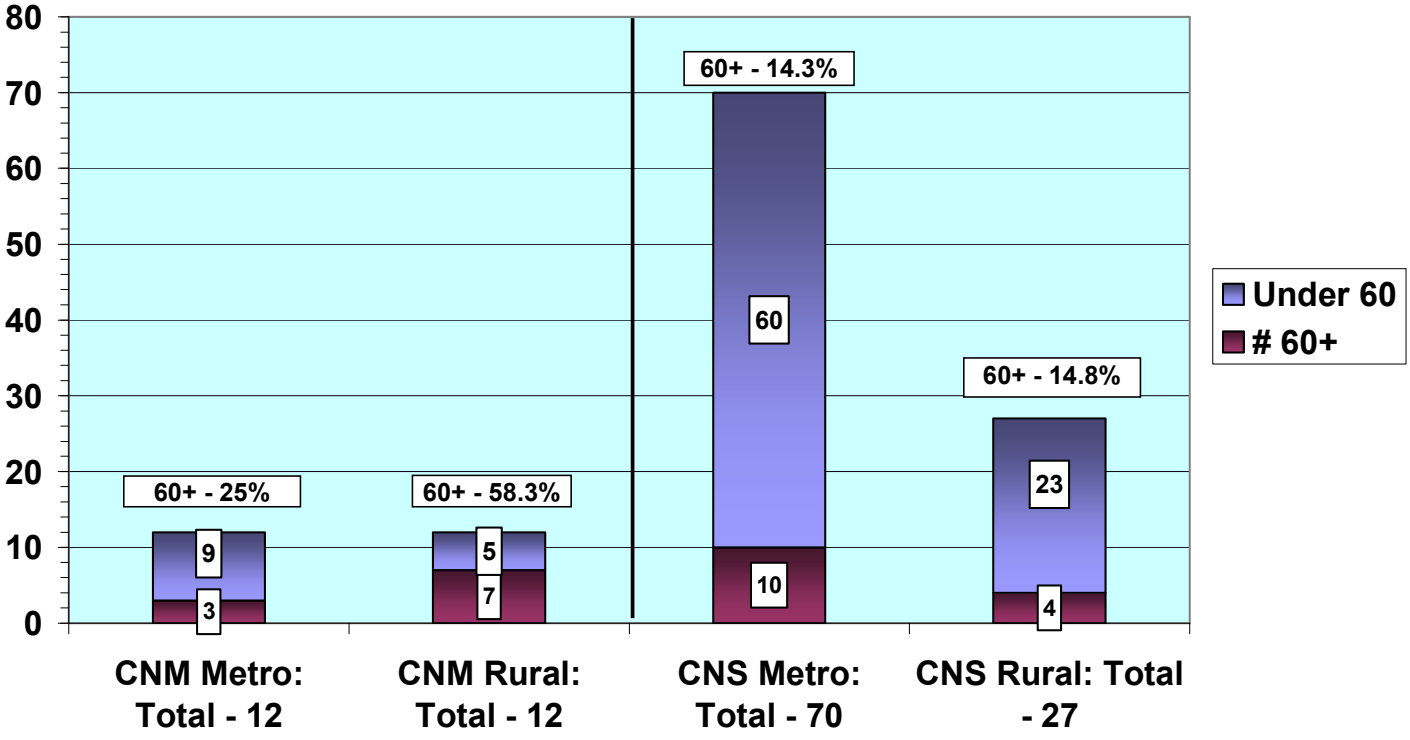
Registered Nurse Practitioners (RNP) & Advanced Nurse Practitioners (ANP) 60+ by MSA '06-'07



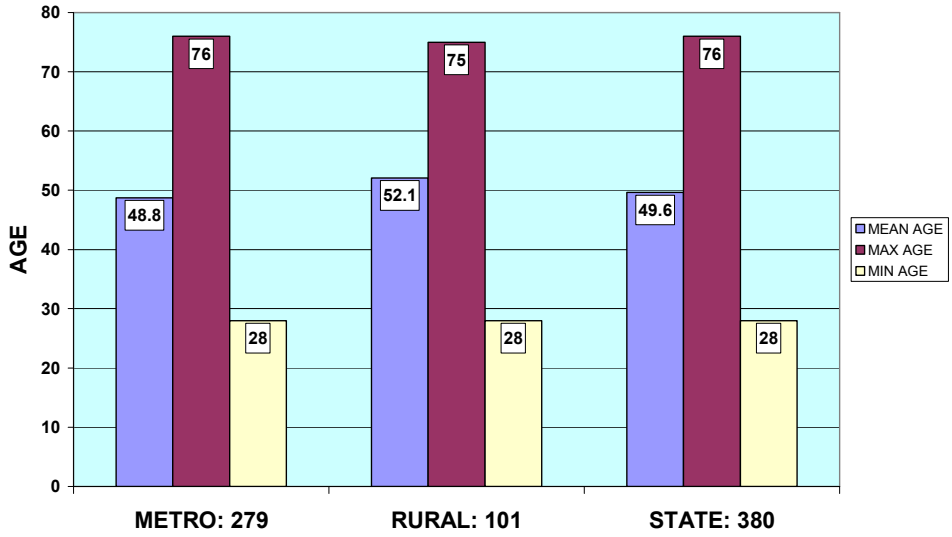
Certified Registered Nurse Anesthetists (CRNA)
& Licensed Practical Technical Nurses (LPTN)
60+ by MSA '06-'07



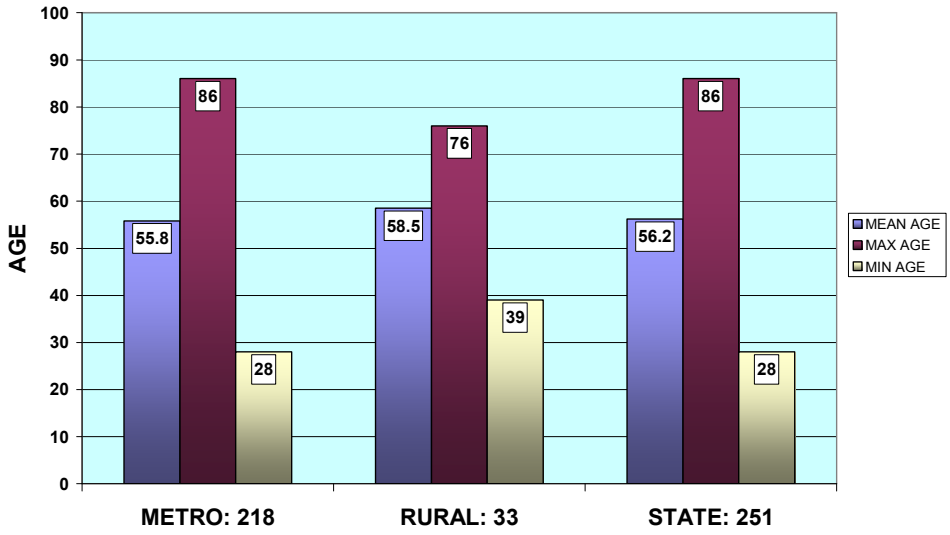
Certified Nurse Midwives (CNM)
& Certified Nurse Specialists (CNS)
60+ by MSA '06-'07



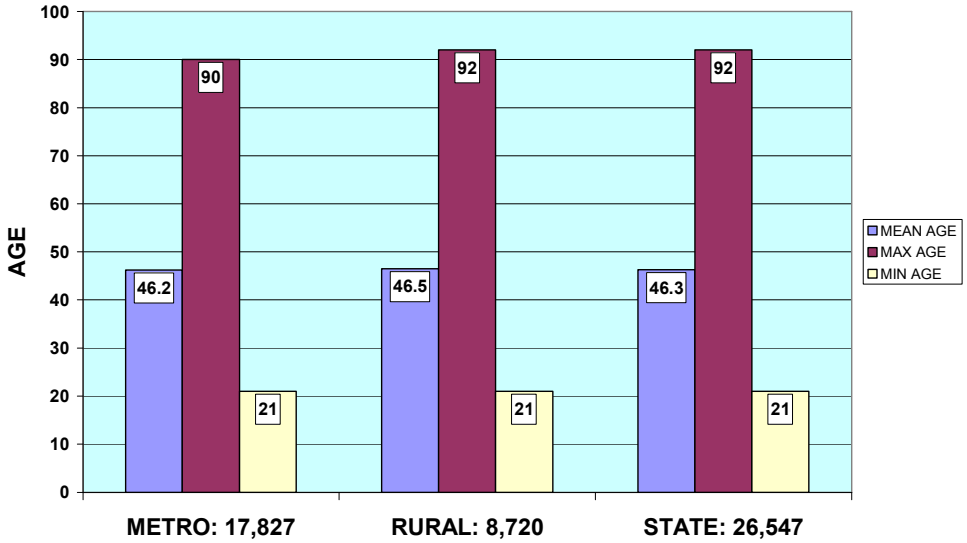
Certified Registered Nurse Anesthetists
'06-'07 Average Ages



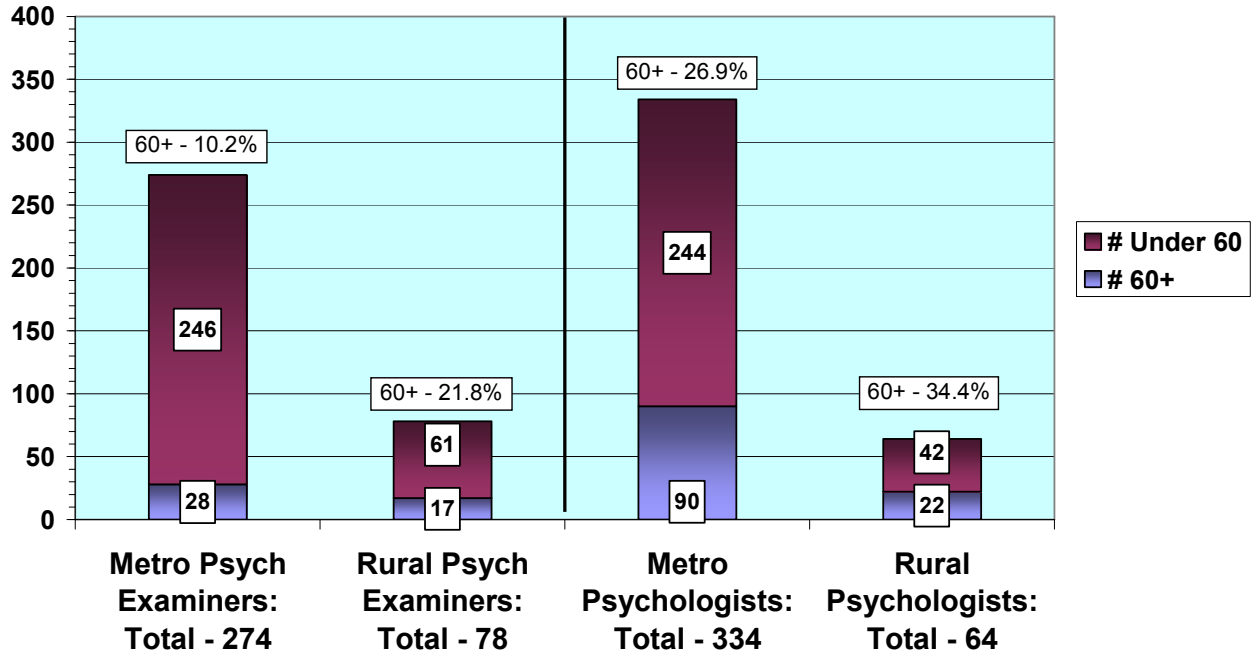
LPTNs
Average Ages '06-'07



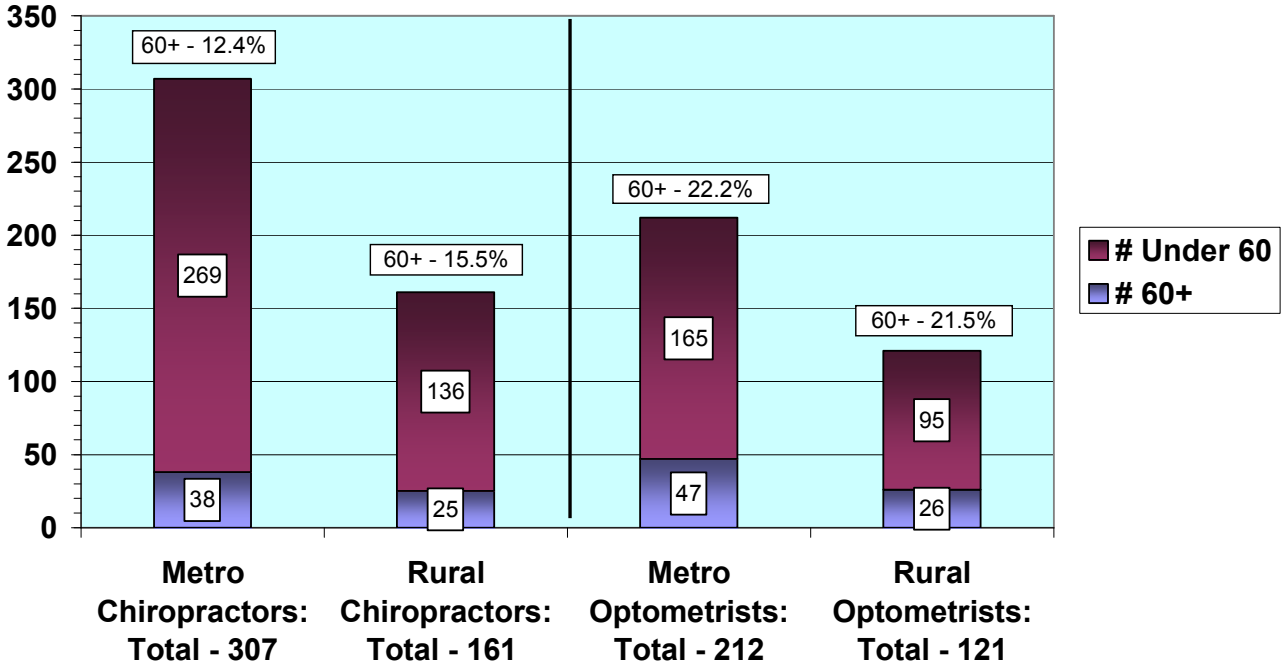
Registered Nurses
Average Ages '06-'07



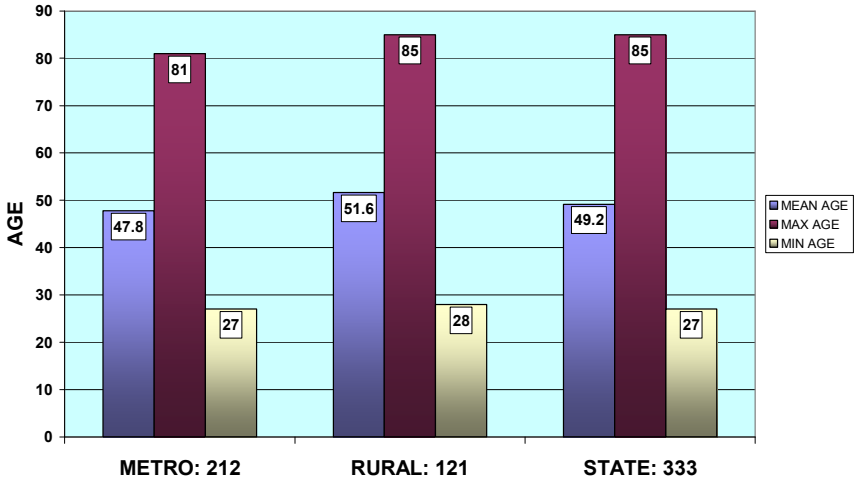
Psych Examiners & Psychologists 60+ by MSA '06-'07



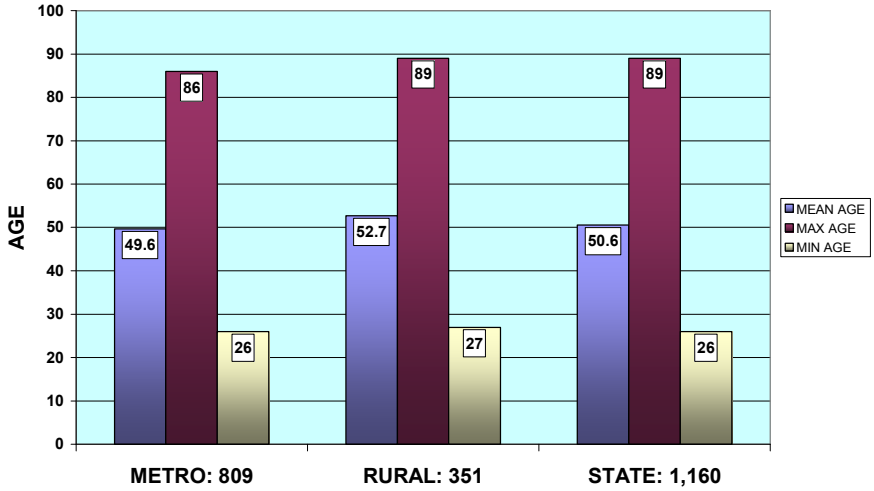
Chiropractors & Optometrists 60+ by MSA '06-'07



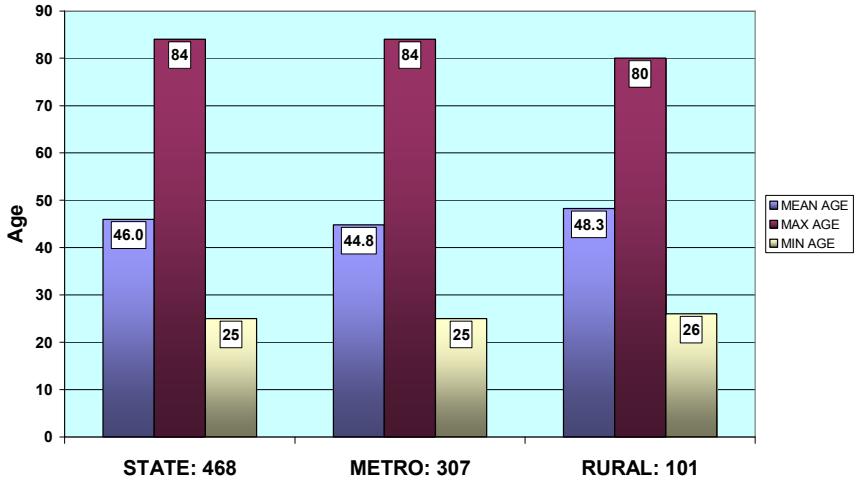
Optometrists
Average Ages'06-'07



Dentists
Average Ages '06-'07

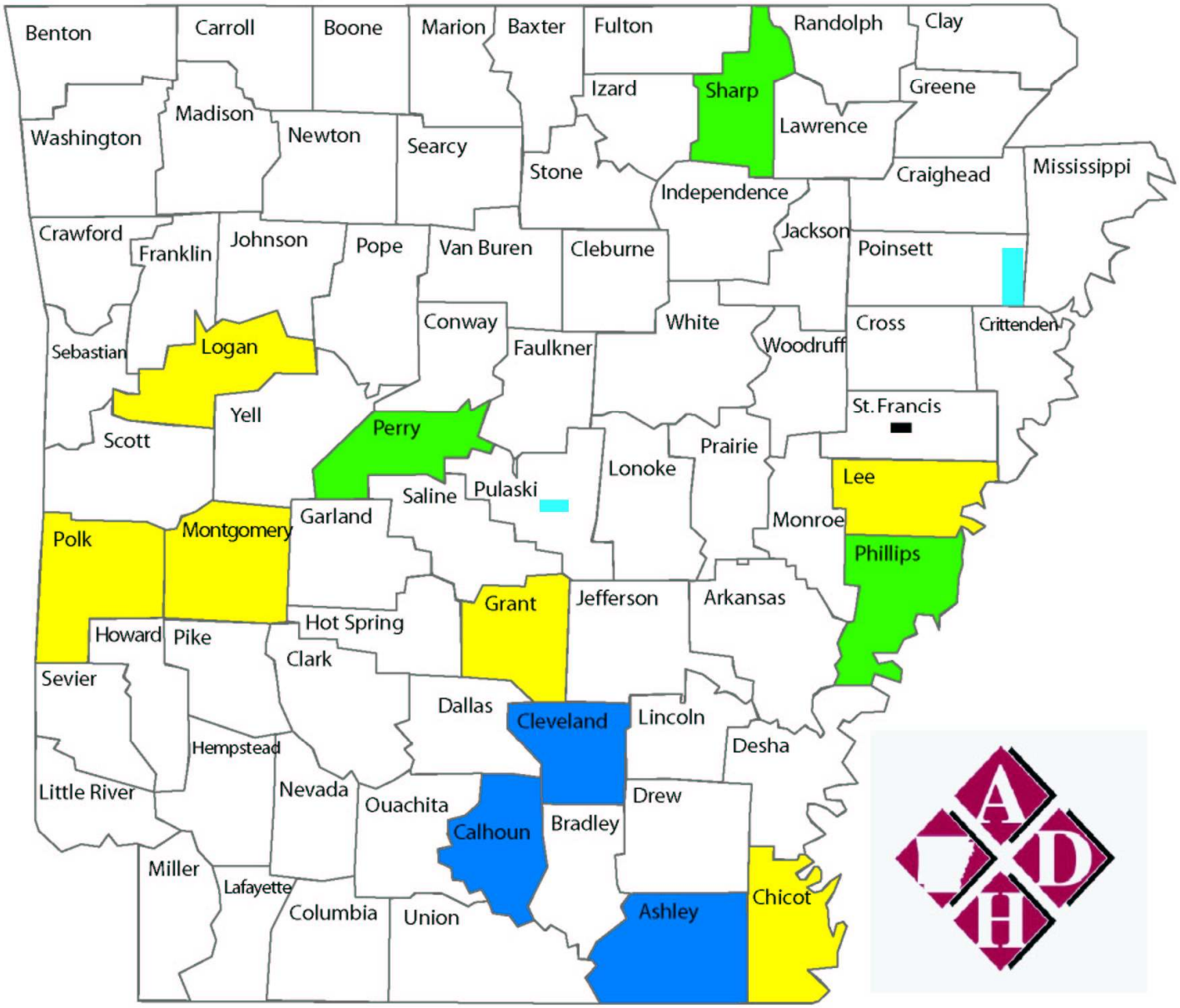


Chiropractors
Average Ages '06-'07



Arkansas

Dental Health Professional Shortage Areas (HPSA)



DEGREE OF SHORTAGE AREAS

- 8,000 - up
- 6,000 - 7,999
- FEDERAL PRISON
- 5,000 - 5,999
- 4,000 - 4,999

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5-21-08

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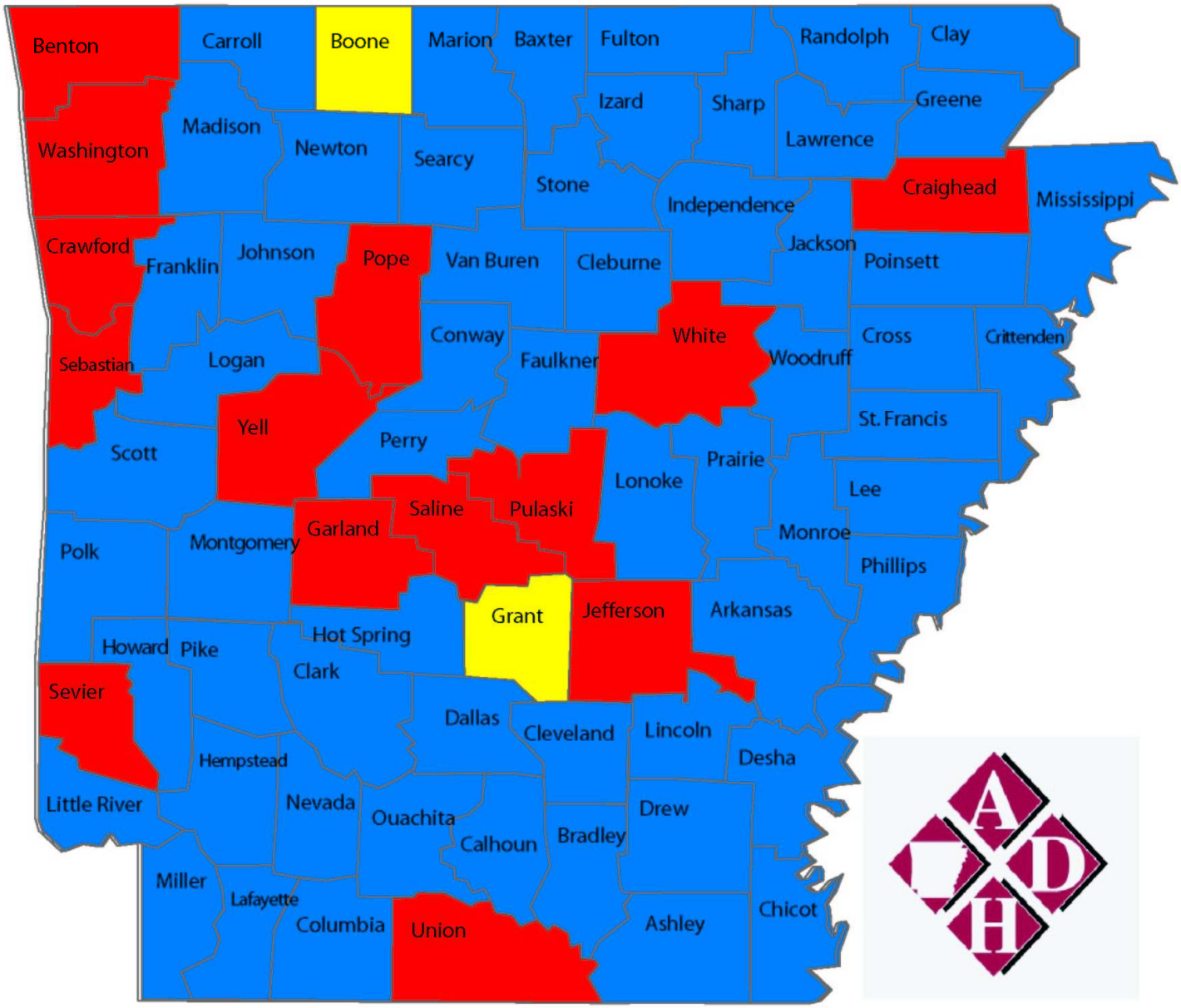
MEDICALLY UNDERSERVED AREAS

(MUA)



Entire County Designation

Partial County Designation

No Designation

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5-21-08

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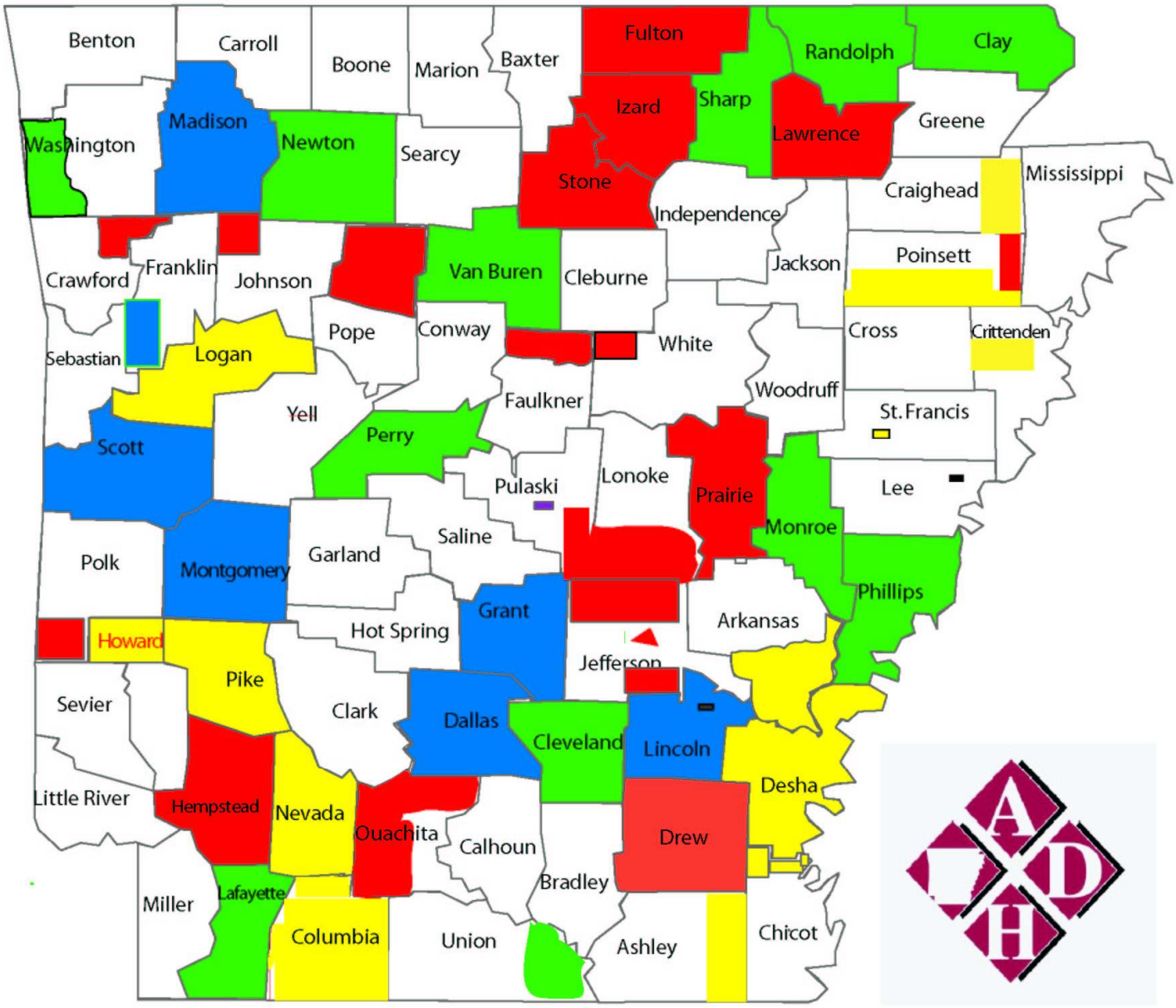
Primary Care Health Professional Shortage Areas (HPSA)



DEGREE OF SHORTAGE AREAS

- 5,000: 1 or physicians
- 4,000 - 4,999 : 1
- 3,500 - 3,999 : 1
- 3,000 - 3,499 : 1
- Prison Designation
- Facility Designation
- Federal Prison

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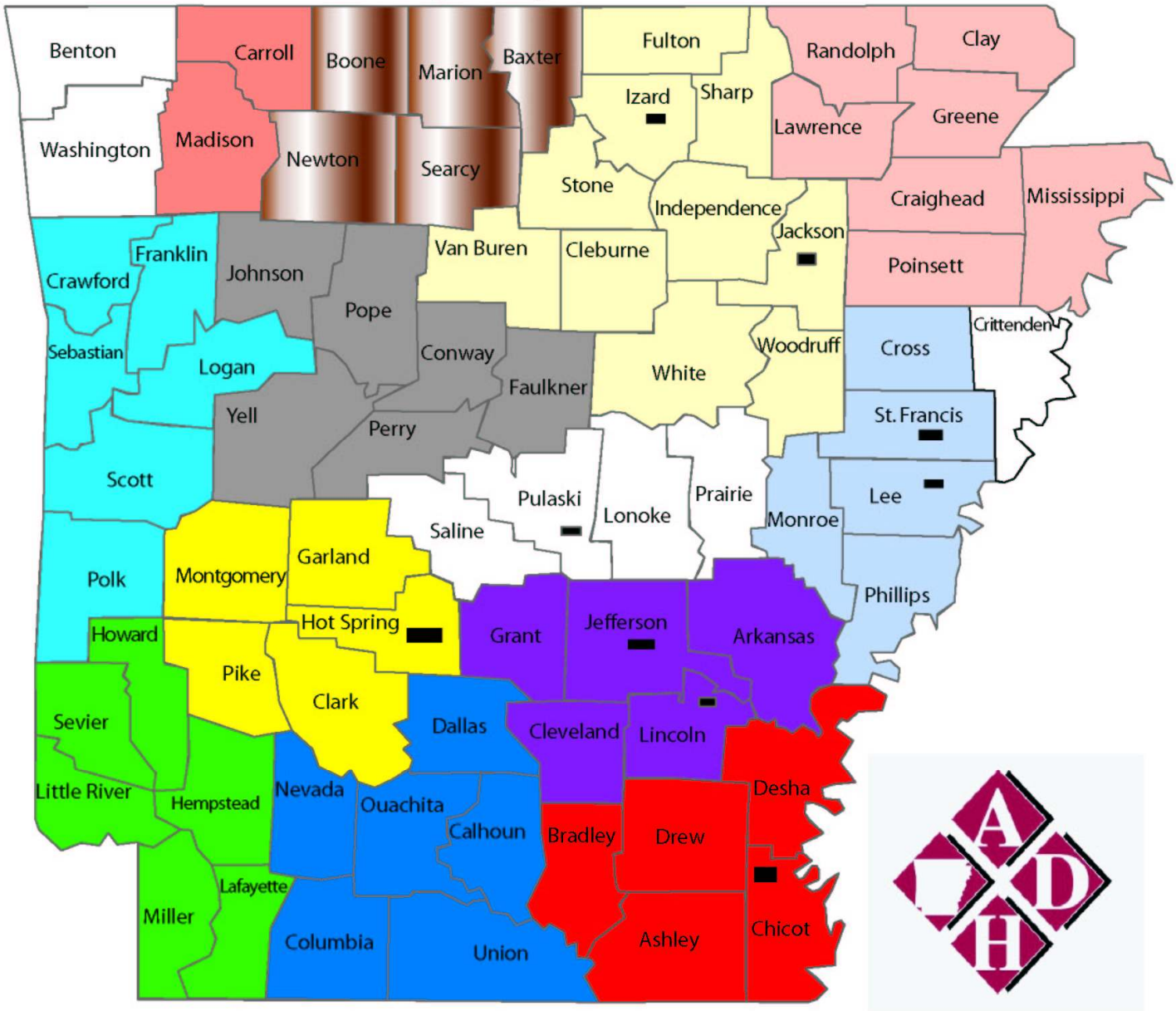
Mental Health Professional Shortage Areas

(HPSA)



CATCHMENT AREAS

- TEXARKANA
- EL DORADO
- MONTICELLO
- Mt. Home
- FORT SMITH
- HOT SPRING
- PINE BLUFF
- HELENA
- STATE/FEDERAL PRISONS
- MADISON/CARROLL
- RUSSELLVILLE
- BATESVILLE
- JONESBORO

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501-280-4912

5-21-08

Link: Healthyarkansas.com

APPENDIX 10. Critical Access Hospitals Steering Committee Members

CRITICAL ACCESS HOSPITAL STEERING COMMITTEE MEMBERS

Andrea Ridgway
ADH/Hometown Health Improvement

Andreas Muller
UAMS/College of Public Health

Angela Richmond
Fulton County Hospital
Community Medical Center of Calico Rock

Ann Bynum
UAMS/Rural Hospital Program

Anna Huff
Mid-Delta Community Consortium

Betty Jones
Hughes, Welch and Milligan

Bill Couch
Hughes, Welch and Milligan

Bill Stricklin
ADH/Office of Rural Health and Primary Care

Billie Launius
Dallas County Medical Center

Brian Bickel
Howard Memorial Hospital

Bruce Bennett
Chicot Memorial Hospital

Christina Hockaday
St. Anthony's Medical Center

Connie Melton
ADH/Health Facilities Services

Craig Ortego
Delta Memorial Hospital

Darren Caldwell
DeWitt City Hospital and Nursing Home

David Deaton
Little River Memorial Hospital

David Taylor
ADH/EMS Trauma Systems

David Wheeler
Eureka Springs Hospital

Don Adams
Arkansas Hospital Association

Dzaidi Daud
Booneville Community Hospital

Ed Lacy
Baptist Medical Center Heber Springs

Eileen Kelley
ADH/Center for Health Statistics

Frank Schupp
South Mississippi County Medical Center

Gary Sparks
CrossRidge Community Hospital

George Fray
Lawrence Memorial Hospital

Greg Hart
Pinnacle Business Solutions

Greg Stubblefield
Baptist Medical Center Arkadelphia

Harold Mitchell
Bradley County Medical Center

Heather Hartlerode
UAMS/Rural Medical Student Leadership Association

James Magee
Piggott Community Hospital

Jim Maddox
Mercy Health System

John Baker
UAMS/College of Public Health

John Heard
McGehee Desha County Hospital

Jonathan Treece
UAMS/Rural Medical Student Leadership Association

Joseph Mitchell
River Valley Medical Center

Karen Craft
Stone County Medical Center

Ken Tillman
Arkansas Farm Bureau

Kirk Reamey
Ozark Health Medical Center

Kristy Noble
St. John's Hospital

Lynn Caldwell Hawkins
Community Health Centers of Arkansas

Mandy Hooker
DeQueen Medical Center

Mark Mengel
UAMS/AHEC Program
Melody Parsley
ADH/Hospital Preparedness

Morgan Hogue
UAMS/Rural Practice Program

Nancy Coleman
Health Resources of Arkansas

Pam Brown
Arkansas Foundation for Medical Care

Paul Cunningham
Arkansas Hospital Association

Phil Matthews
Arkansas Hospital Association

Randall Anderson
ADH/Office of Rural Health and Primary Care

Renee Mallory
ADH/Health Facilities Services

Russ Sword
Ashley County Medical Center

Stephanie Williams
ADH/Hometown Health Improvement

Stephen Lagasse
USDA – Arkansas Office

William Rodgers
ADH/Office of Rural Health and Primary Care